THE SOCIAL CONTRACT

Vol. VIII, No. 3 Spring 1998

Essays on the Malthus Bicentennial by:

Virginia D. Abernethy

Albert A. Bartlett

Katharine Betts

Vernon L. Briggs, Jr.

John Cairns

William Catton

Antony Flew

Werner Fornos

Paul Gottfried

Lindsey Grant

Garrett Hardin

Diana Hull

Sheila Newman

William Paddock

Jack Parsons

Plus book reviews by Getrude Himmelfarb, Ed Levy and Wayne Lutton

Special Issue

Malthus Revisited

A Collection of Articles Commemorating the Bicentennial of Malthus' Essay on the Principle of Population

Thomas Robert Malthus (1766-1834)

[Photo courtesy: British Museum ©]

economist • statistician
social scientist • teacher
ecologist • mathematician
cleric • futurist • social critic

U.S. $7.50 • ISSN 1055-145X

Visit us on the internet at **www.tscpress.com**

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

About The Social Contract

The English philosopher John Locke, whose thinking helped inspire the American revolution, said that society should be governed by an understood set of values he termed "the social contract." Under the social contract, governments have obligations to their citizens, and citizens have responsibilities to society.

Most great public issues are basically moral and ethical ones. What is the right thing to do? How do we decide what we think is right? When "rights" collide, which ones take precedence? The concept of the social contract helps us sort out the difficult issues confronting American society today and helps us find balance.

Each quarter, **The Social Contract** journal examines trends, events and ideas that could unravel America's delicate social fabric. Key topics addressed by this journal:

- *Human population issues, including absolute size, rate of growth and distribution.* Do cherished American ideals prosper or suffer through further population growth?
- *Immigration issues.* In order to best facilitate meeting the highest goals of the American people, (1) how many immigrants should we admit? (2) who should be admitted, and (3) how can we humanely enforce the rules?
- *Language, assimilation, culture and national unity considerations.* What are the shared values necessary to the maintenance of our social contract?
- *The balance of individual rights and civic responsibilities.* Since the previous issues are so often framed in terms of rights, what are the balancing obligations?
- *Other nations' efforts at guarding or creating their own social contracts.* What practical insight can be gained from observing the failures and successes in nation-building by other societies?

The Social Contract explores these complex and interrelated issues with articles varying greatly in outlook and philosophy in the attempt to further vigorous public debate.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

THE SOCIAL CONTRACT

Vol. VIII, No. 3 Spring 1998

Malthus Revisited: A Collection of Essays Commemorating the Bicentennial of his Essay on Population, 1798-1998

Editorial: The Durable Rev. Malthus 155

The Rev. Thomas Robert Malthus: The Man and His Message

Malthus Revisited 157
John Cairns, Jr.
Professor Cairns focuses on Malthus' concern that resources are not unlimited.

A Post-Malthusian View of Malthus 168
Lindsey Grant
Grant presents an overview of Malthus' thinking, reflecting that after 200 years he remains a seminal contributor.

The Rev. T. R. Malthus: The Man, the Myth and What He Really Said 176
Jack Parsons
Biographies and correspondence reveal a person who differs from the characterizations.

The Feast of Malthus 181
Garrett Hardin
Dr. Hardin discusses why Malthus has been so vigorously attacked over the past two centuries.

Malthus and Carrying Capacity

Back to Malthus 188
Werner Fornos
Population expert Fornos asserts that Malthus' concern that population could outgrow resources is timely; Malthus was simply ahead of his time.

Malthus — Right or Wrong? 197
William Paddock
Agriculturist Paddock argues here that Malthus was essentially correct and that his concerns apply particularly well to the earth's tropical zone.

Malthus As a Thinker in New Directions

Malthus: The Economist 206
Vernon M. Briggs, Jr.
Economics professor Briggs looks back to Malthus as holding the very first British chair in "political economy."

Thomas Malthus and Australian Thought 216
Sheila Newman
The colonization of Australia was strongly influenced by the then-current ideas springing from Malthus' writings.

Malthusian Population Policies and the Growth of Social Science 222
Antony Flew
Professor of Philosophy Flew finds that Malthus provided impetus toward the development of scientific social studies.

What Do We Think of Malthus Today?

Malthus in the Sky with Diamonds 226
Diana Hull
In a humorous vein, Dr. Hull suggests that were he to return today, Malthus would find much in our contemporary world confirming his basic concerns.

If Malthus Was So Wrong, Why Is Our World in Trouble? 231
William R. Catton, Jr.
Sociology Professor Catton discusses why some still insist that there are no limits to growth.

Malthus Marginalized 239
Albert A. Bartlett
Professor of physics Bartlett analyzes the "massive movement to marginalize Malthus' message."

Malthus' Influence on Current Thinking

The Evolution of Social Capital 252
Katharine Betts
Dr. Betts discusses the possible origins of altruism and cooperation in the formation of social contracts.

Malthus and the 21st Century 262
Virginia Deane Abernethy
As an anthropologist, Dr. Abernethy asserts that rightly understood, Malthus was right after all.

Malthus As Anti-Utopian 267
Paul Gottfried
Professor Gottfried places Malthus within the context of Western political and economic thought.

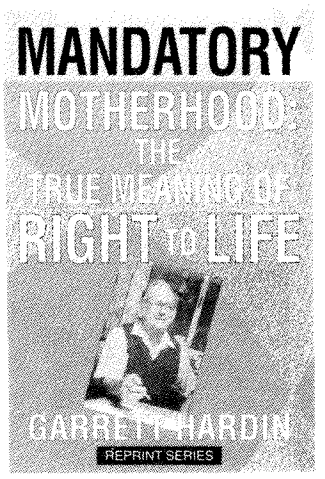
Book Reviews

Progress, Poverty and Population *by John Avery*
Reviewed by Gertrude Himmelfarb 270
The Other Americans *by Joel Millman*
Reviewed by Edward Levy 275
A Bicentennial Malthusian Essay *by John Rohe*
Reviewed by Wayne Lutton 282
Beyond Economics *by Gary Sauer-Thompson and Joseph Wayne Smith — Reviewed by Ted Wheelwright* 283

THE SOCIAL CONTRACT is published four times a year by The Social Contract Press, 316½ East Mitchell Street, Petoskey, MI 49770.
Phone (616) 347-1171, Fax (616) 347-1185. Send mail correspondence and address corrections to address above, or e-mail to soccon@freeway.net. See our World Wide Web page at www.tscpress.com.
To order subscriptions or books call toll free: 1-800-352-4843. Third class postage paid at Petoskey, Michigan. Copyright © 1998.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Newest Title in our Hardin Reprint Series



In *Mandatory Motherhood*, noted biologist Garrett Hardin counters "Right-to-Life" arguments with devastating logic and solid biological and legal evidence.

An expert on family planning and population control, Dr. Hardin has long been a pro-women's choice activist in the abortion fight.

Here, in terse, convincing, and often witty style, he discusses a wide spectrum of controversial issues, including giving a fetus all the rights of a human being, the male penchant for legislating the rights of a woman to control her own body, and the question of when life really begins.

Paperback, 156 pages
$11.95

Order from The Social Contract Press
1-800-352-4843

Editor and Publisher
John Tanton
Petoskey, Michigan

Associate Editor
Wayne Lutton
Petoskey, Michigan

Managing Editor
Robert Kyser
Alanson, Michigan

Washington Editor
Roy Beck
Arlington, Virginia

Senior Analyst
James Robb
Arlington, Virginia

Washington Office
1601 N. Kent Street, #912
Arlington, VA 22207
phone 703-816-8820
fax 703-875-0345

International Correspondents

Gerda Bikales
Paris, France

Wolfgang Bosswick
Nurnberg, Germany

Denis McCormack
North Fitzroy, Victoria, Australia

Editorial Advisory Board

Sharon Barnes
Brooklyn, New York

Hugh Graham
Nashville, Tennessee

Katharine Betts
Mt. Waverly, Victoria, Australia

Otis L. Graham Jr.
Wilmington, North Carolina

Leon Bouvier
Lady Lake, Florida

Janet F. Harte
Corpus Christi, Texas

Vernon L. Briggs Jr.
Ithaca, New York

Ira Mehlman
Los Angeles, California

Viktor Foerster
Nurnberg, Germany

David Simcox
Louisville, Kentucky

Dan Stein
Washington, D.C.

The Social Contract is published quarterly.
© 1998 by The Social Contract

Editorial and Subscription Offices:
316½ E. Mitchell Street, Petoskey, Michigan 49770
phone: 616-347-1171, fax: 616-347-1185
Email: soccon@freeway.net
World Wide Web page: http://www.tscpress.com

Third Class Postage is paid at Petoskey, Michigan

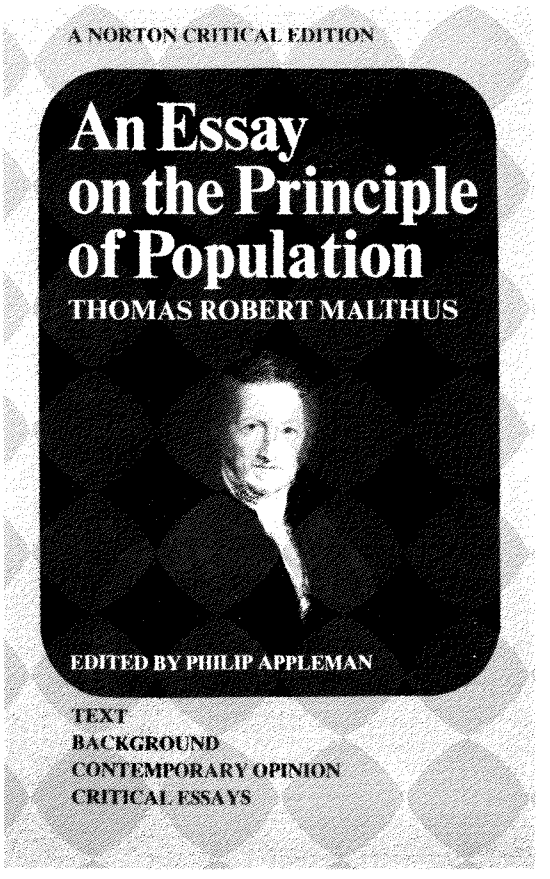
LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Letter from the Editor

The Durable Rev. Malthus

Which of us expects our writings to still be under discussion two hundred years from now? None, I suspect. Thomas Robert Malthus achieved that distinction with his *Essay on the Principle of Population,* published anonymously on June 7, 1798. Regardless of which side they take, critics acknowledge his primacy in the population debate. We are pleased to bring out this commemorative issue in time for the bicentennial of Malthus' seminal paper, with the hope that our publication of this collection of essays will help stimulate a reexamination of the man and his work.

The durable Rev. Malthus keeps cropping up despite repeated attempts by his detractors to put him to rest. As we go to press, the *Detroit News* has just pronounced him as "thoroughly discredited" by the economic advances of the Industrial Revolution. One wonders if the *News* editorial writers have even read the original *Essay,* which is among the most important writings of the first person in the West ever to hold a chair in political economy — economics, in present-day parlance.



Planning for this *festschrift* began over two years ago. We started with a re-reading of the *Essay* itself in the Norton Critical Edition entitled *An Essay on the Principle of Population,* edited by Philip Appleman and published in 1976. This excellent compendium contains not only the original essay, but also the important changes the author made in the edition of 1803, in which he envisioned ways to limit fertility as an approach to the problems foreseen in 1798.

The Norton edition also presents essays on Malthus the man, on his times, and on the Utopians Godwin and Condorcet, to whom he was responding — as well as a collection of nineteenth and twentieth century commentary on Malthus and his "principle." As background we supplied a copy of this book (ISBN 0-393-09202-X) to all who agreed to write for this issue of *The Social Contract.* We recommend it highly to any who wish to look seriously into the population question.

Our project became one of trying to bring the debate forward from the Norton book of 1976 to the present, and of developing a better understanding of the socio-economic climate of the late eighteenth and early nineteenth centuries. We wanted to learn where Malthus' ideas had stood the test of time, but also where he was wrong or needed updating. Ideological vindication was not our goal.

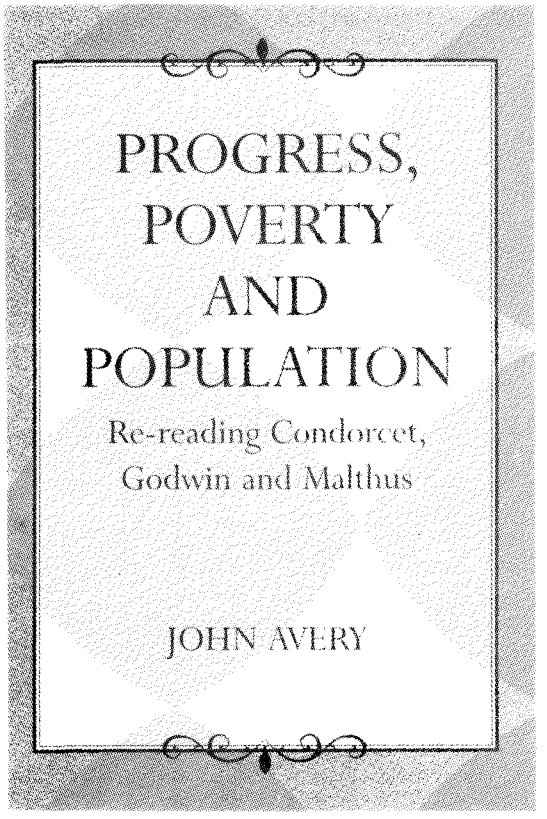
In the course of our research we came across *Progress, Poverty and Population: Re-Reading Condorcet, Godwin and Malthus* by John Avery (Frank Cass, 1997, ISBN 0-7146-4750-0). We also highly recommend this book to those seeking to understand the circumstances of the 1790s, especially the effect of the French Revolution on British thinking, as well as the very interesting lives of Godwin, Condorcet and such associated personalities as Percy Shelley and Mary Shelley (author of *Frankenstein*).

It turns out that Malthus was something of a

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

polymath. As mentioned above, he held the very first economics chair established in the western world. He had a well-formed idea of limits, the forerunner of the current concept of carrying capacity. He formulated the related economic concept of marginal utility.

He was a pioneering sociologist, one of the first to undertake extensive field studies, all in preparation for subsequent editions of *On Population* — there was a total of six. Through his father he had met Rousseau as a child. He had lively debates with his contemporary, economist David Ricardo, with whom he became a fast friend. He even inspired a biological form of economics in far-off Australia, as author Sheila Newman explains.



Malthus was also a man of the cloth, though he took holy orders chiefly because this was required to become a faculty member at Cambridge, as was bachelorhood. (Times have changed!) He did have a parish appointment, which provided some income, though he left most of the preaching to others as he had a cleft palate and resultant speech defect. (He had this operated on — in the days before anesthesia!) He was by all reports a delightful conversationalist and companion.

We are particularly pleased with the quality of the articles presented here. They cover many of Malthus' attributes mentioned above. We are especially happy that the biological dimension comes in for discussion since we are devotees of Garrett Hardin (University of California at Santa Barbara) and of E. O. Wilson (Harvard), both of whom have been doing so much to highlight the role of biology in human affairs.

At the risk of slighting any of the high-caliber essays, we call your attention in particular to the article by William Paddock. Dr. Paddock's paper on the difference between tropical and temperate zone agriculture will be an eye-opener to many of us urbanites who no longer have much contact with the land or the production of food and fiber.

Our collection appears just as attention is coming in the lay press to the phenomenon of prolonged, voluntary, sub-replacement fertility in many of the developed countries. This development might seem to turn the Malthusian analysis on its head, but on closer inspection, his quadripartite concept of positive and preventive checks, and of misery and vice (which several of our authors explain) proves to be surprisingly applicable to the present. This new aspect of the population topic will be the subject of a future issue of *The Social Contract.*

We hope you will enjoy this collection of essays. We plan to publish it in soft cover book format under the title "Malthus Revisited" (ISBN 1-881780-21-X). This should update in a more durable format the Norton collection. We also hope this book will further the debate on the role of population in the generation — and solution — of human problems.

We hereby proclaim the Malthus Bicentennial Year, to run from June 7, 1998 through the same date in 1999. This bicentennial concept can provide a good "hook" for a conference or symposium on population, resources, international migration and/or national unity — all related issues. Perhaps you would like to host one?

JOHN H. TANTON
Editor and Publisher

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Malthus Revisited

Sustainability and the denial of limits

by John Cairns, Jr.

Abstract

In the bicentennial year of Malthus' seminal paper, human society is still debating whether the evidence of biophysical limits on population growth (which applies to other species) also applies to *Homo sapiens*. In terms of evolutionary or geological time, 200 years is a trivial span to test such a hypothesis. Human ingenuity and technology appear to invalidate Malthus' hypothesis, although the present living conditions of at least 2 billion people support Malthus' idea. However, the emerging debate on sustainable development or sustainable use of the planet has again raised questions about whether infinite growth in any species can occur on a finite planet., No other habitable planets are known and, even if they are discovered, shipping 95 million people annually to another location might exhaust Earth's resources more quickly than sustaining the population here. As many others have noted, human society is engaged in a global experiment with no "control" planet. Unlike changing from an airplane that may be in poor condition, humans do not have the option of catching another planet. This paper analyzes some of the issues raised by Malthus in a sustainability context.

> ***A wrongdoer is often a man who has left something undone, not always someone who has done something.***
> — Marcus Aurelius
>
> ***All man's troubles arise from the fact that we do not know what we are and do not agree on what we want to be.***
> — Vercors (Jean Bruller)
> *You Shall Know Them* (1953)

What Hasn't Changed in the Last 200 Years?

(1) Human society still views complex, interactive systems in terms of special interest components (i.e., those of obvious interest personally or to an applicable group). The failure in this view is not realizing that affecting the components affects the system, and the system affects the components and, ultimately, human society.

(2) Human society looks for single connections rather than patterns. Those who look at patterns are disregarded because the short-term uncertainty is usually higher than for simple, even limited, multiple connections.

(3) Human society rarely acknowledges the programmatic futility of single-interest, lobby- (i.e., money-) dominated politics.

(4) A touching but dangerous belief is that problems caused by technology can be solved by more technology, rather than by changes in societal behavior.

What Has Changed in the Last 200 Years?

(1) The power of individuals, especially terrorists, to place the social order in disequilibrium has vastly increased and is becoming worse.

(2) Ecological capital (e.g., old growth forests, etc.) has decreased dramatically. The per capita decrease is even more dramatic due to increased numbers of humans.

(3) Economic and, arguably, ecological disparities for individuals have markedly increased, thus providing disincentives for the average human to work for the common good.

(4) Natural systems are highly manipulated parts of industrial society. As Holmberg and Robèrt (draft) state: "The industrial society can be said to be a highly manipulated part of the natural ecosystem, but its dependence on, and influence on, the natural ecosystems are determined by the same basic laws of nature that are in operation in nature itself."

John Cairns, Jr. is University Distinguished Professor of Environmental Biology Emeritus in the Department of Biology at Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061. He retired in 1995 but maintains an office and continues to do research and to write.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Uncertainties Associated with Human Society's Largest Experiment

As Schneider and Londer (1984) note, climate both influences and is influenced by life on Earth — the two appear to have coevolved. Unquestionably, the interactions are intricate and profound. Persuasive evidence also indicates that human society and natural systems are coevolving (e.g., Janzen, 1984; Cairns, 1994, 1997a). Cairns (1996) notes that this type of coevolution can be either hostile or benign (the relationship leading to sustainability). The harmonious aspects of coevolution in natural systems are often the result of harsh penalties exacted on those individuals or components that do not respond adequately or with sufficient rapidity to alterations in other components. In more blunt terms, global experiments with climate and ecological life-support systems can result in extremely harsh penalties to human society. If significant uncertainties about the outcomes of various courses of action (such as crossing an ecological threshold without realizing it or relying on human ingenuity and technology to replace all exhausted resources) are in error, human society may cease to exist as it is now known.

Non-renewable resources, such as fossil fuels, are being exhausted at a substantial rate, as are renewable resources/ecological capital such as topsoil, old growth forests, and fossil water. Population is still increasing despite birth rates that are less than replacement rates in some parts of the world, and the disparity in per capita resource use and living standards is increasing at the individual and national levels as well. Equitability and fairness for the entire planet's human population will be resource-use intensive, and efforts to increase standards of living for the billions now deprived will almost certainly be a final blow to Earth's ecological life support system.

The Uncertainty/Risk Paradox

The absence of certainty is not synonymous with the absence of risk. The statement is platitudinous, but 200 years of inaction since Malthus' seminal publication indicates that this statement is not commonplace for a number of societies. The December 1997 Climate Summit in Kyoto, Japan, indicates a reluctance by human societies to accept that their unwillingness to change their behavior does not suspend consequences of biophysical (i.e., natural) laws. The next "Kyoto Summit," whenever and wherever it is held, will almost certainly be convened to discuss ways to minimize the consequences of climate change. At the time of the 1997 summit, the news media reported that increased ultraviolet radiation from depletion of the protective ozone layer may be responsible for the demise of salamanders and other amphibians. Even before such evidence became available, amphibians were suffering despite the uncertainty/risk dilemma, even 200 years after Malthus' publication.

One of the major consequences of the increasing temporal, spatial, and intensity scales of environmental problems is an increase in the uncertainty of predictions of environmental outcome and consequences. Tolerance of scientific uncertainty and tolerance of risk are both appropriate subjects for debate before decisions are made that will affect environmental health and condition. However, they are linked — acting with an intolerance of uncertainty usually demands a high tolerance for risk. If the consequences of inaction are likely to be severe, even though not certain, one should be willing to act even in the face of high uncertainty.

"...increasing standards of living for the billions now deprived will almost certainly be a final blow to Earth's ecological life support system."

Cairns (1992) notes a vast difference between the response to perceived personal risk as opposed to risk to ecosystems. Chemicals may kill a few people and take a few years off the lives of others, but the collapse of Earth's life support systems may kill billions, or at best, cause billions to suffer. In an interesting article in *Science* (January 19, 1990), asbestos abatement costs versus the budget for the National Institutes of Health (NIH) were covered, as well as asbestos risks in the perspective of other hazards, such as long-term smoking, home accidents, motor vehicle accidents, high school football, and

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

the like. For some reason, a chemophobia exists for both certain chemicals and the perceived risks from them, however improbable according to the evidence. These fears are greater than the much more probable, though not certain, risks from the collapse of Earth's life support systems. Human society will not be able to address crucial societal problems until it comes to grips with the uncertainty/risk paradox and realizes that uncertainty does not permit it to evade the laws of nature (nor do economic and social needs).

Rights versus Responsibilities

In order to avoid the suffering predicted by Malthus, human society would either have: (1) to practice mutually agreed coercion to limit population size and utilization of resources to fit the planet's carrying capacity or (2) to depend on an enlightened citizenry with sufficient compassion for future generations and other species to impose these restrictions voluntarily. However, a strong distrust of government and an increasingly vocal, militant stress on perceived individual rights exist at present. In his forthcoming book *You're Driving Me Crazy*, Scott Geller (personal communication) gives much attention to aggressive automobile driving. This situation is just one of many examples of decreased civility and lack of concern for others. To offset this trend, Geller, (1994, 1996) espouses an "actively caring model," which stresses the positive benefits of appropriate behavior rather than the dire consequences of inappropriate behavior.

"Given the shocking display of irresponsibility of large segments of society ... is it realistic to expect a feeling of responsibility for passing on a habitable planet to future generations?"

In the United States, and likely in other countries as well, many grandparents are caring for their grandchildren because the grandparents feel more responsibility for these children than their actual parents. Many others of the same age as the grandparents or younger have had adult children return to their home so that these adult children can continue the lifestyle they previously enjoyed, without earning enough money to do so on their own. These adult children feel they have a "right'" to these services, whether it means asking someone else to care for children they have produced but are incapable of caring for, or whether it is a lifestyle to which they have become accustomed but which they are incapable of achieving on their own. The reason for introducing these depressing circumstances is to illustrate the point that some people feel an intense responsibility and others are almost polar opposites, despite being members of the same extended family. Given the shocking display of irresponsibility of large segments of society, even when their own offspring or close family members are involved, is it realistic to expect a feeling of responsibility for passing on a habitable planet to future generations? In addition, is it reasonable to expect those so insistent on the exercise of their own perceived "rights" (to the extent that they neglect or ignore the rights of blood relatives) to show restraint that will permit future generations of their own species and other species to survive or, better yet, thrive? Ecologist Kinne (1997) feels that modern societies are preparing the scene for suicide by destroying the basis of life on Earth. Wilson (1993) expresses a similar view in a *New York Times* Sunday magazine supplement.

One wonders how Malthus would analyze the present situation, except that he might state that there is no "right" to survive, either as individuals or societies! The opportunity to survive exists if human society pays careful attention to the biophysical laws of nature. However, this acknowledgment is only the first step. Ehrlich (1997) discusses what professional ecologists should be doing about the world's plunge toward ecocatastrophe. He notes that increasing numbers of ecologists are beginning to understand that the major thrust in saving the world will occur in the realm of the social sciences — especially in ecological economics. This scenario will mean venturing into areas that make most ecologists, and scientists in general, exceedingly uncomfortable. However, Wilson (1998a) believes that now is the time for "hard" sciences and the social sciences to come together. Not too long ago, an applied ecologist was considered a second-rate citizen by the

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

theoretical ecologists. This hierarchy still exists, and there are vestiges of this relationship remaining to this day.

What in the 1990s Would Surprise Malthus?

Leopold (1966), who effectively expressed the joy of ecology, was acutely aware of its pain, as shown by the statement:

> *One of the penalties of an ecological education is that one lives alone in a world of wounds... An ecologist must either harden his shell and make believe that the consequences of science are none of his business, or he must be the doctor who sees the marks of death in a community that believes itself well and does not want to be told otherwise.*

Ehrlich (1997) recounts personal observations of wounds developing in healthy ecosystems in numerous and widely scattered portions of the planet. Malthus was primarily concerned with the ability of *Homo sapiens* to produce offspring well beyond the replacement rate, even in his era, and about the limitations of resources, particularly food, on a finite planet. He was not concerned, nor was there then reason to be, about the dramatic assault on the environment that has caused the present problems of biotic impoverishment, fragmentation of habitat, ozone holes, global warming, and loss of topsoil well beyond the replacement rate.

How would Malthus feel about these situations in the bicentennial year of his remarkable article? Clearly, sustainable use of the planet was on his mind but, of course, the current phrase "sustainable development" was not. The following are a few of the issues I think would have startled Malthus if he had available a fast-forward time machine permitting access to 1998.

(1) *Even 200 years later, the basic issue is still being debated — are there too many people with too high expectations for a finite planet?*

Despite extensive analyses of the ethical problems (Hardin, 1972, 1993) and population issues (Ehrlich, 1968; Ehrlich and Ehrlich, 1996; Ehrlich et al., 1995) involved, most people are either unaware of the problem or are in a state of denial (Orr and Ehrenfeld, 1995).

(2) *The degree of isolation still continues in the academic disciplines.*

While scientists are more numerous today than in Malthus' time, they are more isolated from each other and far more specialized. The reductionist approach has certainly accomplished much, but the resulting isolation of the disciplines has resulted in a paucity of synthesis as to how the world works.

(3) *A global economy makes resource depletion possible.*

The existence of a global economy makes resource depletion in an area far removed from one's living space quite possible. Thus, Australian forests may supply Japan; the Arabian Peninsula and other areas far distant from the United States supply some of its oil; and many nations deplete ocean resources, which are "common grounds," except, of course, for the areas adjacent to particular nations and claimed by them.

(4) *Some nations have achieved a birth rate below replacement level (e.g., Italy, at 1.35 or so children per woman) and others are still far above replacement rate (e.g., Nigeria).*

Zero population growth is possible, but not universal. I am ambivalent about whether Malthus would be surprised by the legal and illegal immigration into such countries as the United States and Canada. He would probably be surprised that individuals from developing countries could so easily colonize developed countries, given the territoriality of most nations and individuals. For a "nation of immigrants" such as the United States, there is a lack of awareness regarding the effect this will have on long-range demographics (e.g., Lutton and Tanton, 1994), and there is sympathy for immigrants since American ancestors were in this category.

(5) *Malthus would probably be astonished that, with an environmental crisis unprecedented in human history and a human population far larger than even at the beginning of the century, there is so much "business as usual" in the academic community, which might be expected to address these issues more vigorously.*

Harold Mooney, once president of the Ecological Society of America, is quoted by Ehrlich (1997) as stating (to Ehrlich) that one could read an entire year of the journal *Ecology* and not be made aware that an ecological crisis exists. How can ordinary citizens be expected to believe in an ecological crisis if the ecological journals do not proclaim this continually? In recent years, the Ecological Society of America has begun producing

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

a second journal, *Ecological Applications*, which does indicate the existence of an environmental crisis. Is this enough? If there is, in fact, a severe ecological crisis (and I believe there is) it should be proclaimed in every professional journal of ecology as an indication that ecologists have shifted their priorities. The public perceives academics as studying questions and issues that are important for scholarly reasons, but which may be shockingly irrelevant to "real world problems." If scientists were making everyone aware of the ecological situation, Lubchenko (1997) would not have had to exhort the entire scientific community to mount "a more effective, interdisciplinary ... effort on the environment." Lubchenko asks scientists to redirect their efforts and form a new social contract to this end. Presumably, the effort would include all those who signed the World Scientists' Warning to Humanity (Union of Concerned Scientists, 1992), even though they are not allocating a large amount of their professional time to addressing environmental issues, but rather continue in almost complete absorption with their areas of specialization. Since over 1600 scientists signed the warning, I am assuming that at least a substantial number of them, arguably even a majority, are still primarily preoccupied with the specialized area of research that resulted in a "world class" status.

"Has the obviously naive faith [in exhaustible resources] of the frontier society merely been replaced by a faith in unlimited, inexhaustible human creativity and technology...?"

(6) *Companies and, frequently, individuals externalize the costs of doing business and, thus, reap a disproportionate share of benefit, while disseminating the cost throughout society or substantial portions of society.*

Hardin's (1968) classic paper is arguably the most concise and effective examination of this problem of cost shifting. More recently, Hawken (1993), a businessman deeply concerned about environmental problems, described the situation very effectively:

> *The more able a company is to externalize its cost of doing business and to be ruthless in its practices, the greater return on capital it may achieve in the short term. While this is not always the case, it is true often enough to substantiate the point that the growth of money and the enhancement of human welfare are not coincident.*

(7) *Many people still believe that the planet has enough resources to last indefinitely if human ingenuity and technology are coupled with economic development and allowed to proceed unhampered by environmental activists.*

Malthus clearly believed in limits and would almost certainly be appalled by both human society's indifference to limits and, even more troublesome, denial that they exist. Rohe (1997) eloquently reaffirms a finite planet and a world of limits. He admits as unknown how many people the planet can accommodate — but maintains that limits exist. The central hypothesis of the Reverend Malthus was the question "Will human numbers eventually outstrip the carrying capacity of the landmass?" The Carrying Capacity Network (CCN), a non-profit organization in Washington, D.C., defines carrying capacity as "the number of individuals who can be supported without degrading the physical, ecological, cultural, and social environment, i.e., without reducing the ability of the environment to sustain the desired quality of life over the long term." Although phrased somewhat differently, this definition is the goal of sustainable development (e.g., World Commission on Environment and Development, 1987), sustainable use of the planet (e.g., Cairns, 1997b,c), or leaving a habitable planet for future generations. The United States has seen, in just two centuries, the fallacy of maintaining the illusion of unending, inexhaustible resources. Has this obviously naive faith of the frontier society merely been replaced by a faith in unlimited, inexhaustible human creativity and technology, or is there something more?

Orr and Ehrenfeld (1995) believe that willful blindness to ecological/environmental crisis has reached epidemic proportions. Ehrlich and Ehrlich (1996) observe a betrayal of science and reason and have coined the term "brownlash" to describe the propaganda campaign designed to create skeptics

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

who believe that ecologists (or anyone else) are unnecessarily taking the threat of deteriorating life support systems seriously. Ehrlich (1997) notes a major effort in the United States, both within the government and without, to roll back regulations for environmental protection.

An equally daunting obstacle hinders the attainment of sustainability. Durant and Durant (1968) surmise from their study of history that a large gap in per capita income between the wealthy and the poor always demands a redistribution of wealth, either by revolution or government action. Quite clearly, if mechanisms needed to attain sustainability are perceived as creating more hardship for the poor, who vastly outnumber the wealthy, this faction of society will, at the very least, be hesitant to support sustainable use of the planet because they will not view it as being beneficial to either them or their descendants. Since Malthus was attacked for his views in his lifetime, he probably would not be surprised by the shifting defense tactics designed to avoid admitting there are limits.

"[E.O.] Wilson feels that humans are smart enough and have time enough to avoid an environmental catastrophe of civilization-threatening dimensions."

Denial of Limits

Malthus would find the denial of limits stronger in 1998 than 200 years ago. The frontiers of the planet are essentially gone — certainly those that would be hospitable to long-term human residence. Population growth on the planet in the last 200 years has followed Malthus' expectations. Almost certainly, the view of Earth from outer space, Sagan's (1994) *Pale Blue Dot*, put an end to the idea of unlimited space and resources for most rational people. True, the oceans are viewed as an unexplored frontier, but they are not as easily colonized by humans as the relatively uninhabited parts of Earth were in Malthus' time. Some also claim that resources are available on the moon, but the difficulties in summer 1997 with the MIR space station indicate that utilizing these resources will not be easy and may not be cost effective. Even if the oceans could be colonized and resources could be obtained from the moon, human capacity for reproduction would still, in a few hundred years at most, encounter a new set of limits.

In Malthus' time, the ecological collapse of ancient civilizations (e.g., Diamond, 1994, 1997) was not as well known as today. Monitoring of environmental conditions, while not all it could be, is enough to provide warnings of serious declines in ecosystem quality. A number of studies have been provided in the literature on resource depletion and overutilization (Postel et al., 1996; Carson, 1962; Hardin, 1968, 1993). Without question, the opportunity to become environmentally literate is far greater than it was in Malthus' time. Despite this, the acknowledgment of limits seems to be no greater.

Wilson (1993) feels that humans are smart enough and have time enough to avoid an environmental catastrophe of civilization-threatening dimensions. However, he acknowledges that the technical problems are sufficiently formidable to require a redirection of much of science and technology, and that the ethical issues are so basic as to force a reconsideration of the human self-image as species. People who write on the environmental crisis, sustainability, and ecological limits must be optimistic about what human society could do, or why bother to publish on this subject? Most, however, are apprehensive about what human society will do. It seems inescapable, given the conditions of poverty and hunger today, that a large part of humanity will suffer even more in the future because of the glacial slowness of social change. The longer the recognition of limits is postponed, the greater the suffering and societal disruption will be.

Ecological restoration partially reverses the damage to a naturalistic assemblage of plants and animals, but it can only occur while the species exist to recolonize the damaged area. Biotic impoverishment is now occurring at a much greater rate than in Malthus' time, and, if it is not now at a crisis level (and there is persuasive evidence that it is), it soon will be. The next three to five decades will tell whether restoration ecology is merely a "body and fender shop" that repairs damaged ecosystems

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

at an inadequate rate or whether restoration ecology is one of the keys to sustainable use of the planet.

Waiting Until the Last Day

Hardin (1993) gives a marvelous illustration of exponential growth — starting with a single lily pad of a specific size in a pond of a specific size and a specific rate of increase. When will the pond be half-covered with lily pads? This growth will be accomplished on the 29th day, assuming a daily doubling rate. The pond will be fully covered with lily pads on the 30th day, or the next day. The pond's carrying capacity for lily pads, which was only half reached on the 29th day, was fully reached on the 30th day. After the 30th day, half the lily pads produced would suffer seriously because of lack of room, or all the pads would have less surface area to share in collecting photosynthetic energy. These two conditions presumably would result in a declined quality of life for lily pads or, in fact, for the entire plant. Not mentioned in Hardin's example, but quite obvious to an ecologist with his background, is the detrimental effect upon other members of the pond's community of having even half the pond covered with lily pads. Photosynthetic organisms would be deprived of sunlight; organisms eating these would be deprived of nourishment; the pond would be deprived of oxygen produced by organisms such as algae; and nutrient and energy transfer systems would be dramatically altered.

Malthus identified with the problem of carrying capacity over 200 years ago when Earth was far short of reaching these limits. Limits have been expanded by increasing the amount of agricultural land (thus depriving other species of their habitat) and by technological advances, but these increases do not mean that limits have disappeared, but only that their effects have been postponed. When a population with exponential growth crosses a threshold, it usually does so with amazing rapidity, as in the lily pad example.

Why Malthus' Message Is Still Not Received Loud and Clear

Either empirical evidence, plausible speculation about how the situation can be relieved, statements that if the free market economy were given a chance the problem would not exist, or outright denial that there is a problem exist on every issue that appears to illustrate the existence of limits. A selection of illustrative examples follows.

(1) *The world is running out of food.*

Brown (1995) has an extensive and relatively recent analysis of the food situation in China. In contrast, Prosterman et al. (1996), in *Scientific American,* asserted that China's food problems could be met if three conditions were implemented. One of these concerned agricultural development of "waste" land. Presumably this land is now in ecosystems undeveloped by humans, but which furnish services benefitting humans. Such a condition is a short-term, unsustainable solution to a long-range problem. The surprising consequences of exponential growth are not the sole province of population biologists, but results of unbridled growth have been in folktales and the like for centuries. Meadows et al. (1993) use an old Persian legend about an astute courtier who gave a splendid chessboard to his king. The courtier suggested that in exchange the king give him one grain of rice for the first square on the board, two grains for the second square, four grains for the third, etc. Marveling at his good fortune, the king agreed and ordered the rice to be brought from the storehouses. The fourth square in the chessboard required 8 grains, the tenth took 512 grains, the fifteenth 16,384, and the twenty-first square gave the courtier more than a million grains of rice. By the time the counting had reached the fortieth square, a million million grains of rice had to be piled up. The payment could never have continued to the sixty-fourth square because it would have taken more rice than was available. Given the ubiquity of both folktales and peer-reviewed scientific literature, it is difficult to understand how oblivious policymakers remain regarding the consequences of exponential growth.

"When a population with exponential growth crosses a threshold, it usually does so with amazing rapidity..."

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

(2) *Homo sapiens is not exempt from the iron biophysical laws of nature that limit other species.*

An obituary of recently-deceased optimistic economist Julian Simon (Anon., 1998) notes that he "challenged the popular (and still widely held) view that there were limits to growth; in particular that the earth's natural resources were becoming so scarce that they would become even costlier." Simon (Myers and Simon, 1994) also stated that "we now have in our hands the technology to feed, clothe, and supply energy for the next seven billion years." If human ingenuity, creativity, and technology free human society from limiting factors that affect other species, clearly Malthus was wrong. It seems premature to have so much faith in human ingenuity while "poverty, misery, vice, selfishness, famine, disease, and war" (Malthus, as quoted by Himmelfarb, 1998) are so frequently in the news. To this list one might add: terrorism, AIDS, worldwide economic problems, climate change, biological/chemical warfare agents, and aggressive drivers.

(3) *Human society is in ecological denial.*

Orr and Ehrenfeld (1995) believe that human society is in a state of denial about ecological problems. Since denial exists in many forms these days, one more addition to the list is not surprising.

(4) *Society's approach to multidimensional problems is compartmentalized and fragmented.*

Leopold (1990) notes that each government agency often acts as if it were "the only flower facing the sun." Regrettably, the same accusation all too often applies to academic disciplines (e.g., Cairns, 1993). Even a holistic problem such as sustainable use of the planet is fragmented into sustainable-energy, -transportation, -agriculture, and the like. Wilson's (1998a, in press) consilience (literally "leaping together") of a presently fragmented system provides persuasive grounds for optimism.

Perceived Societal versus Personal Risk

A number of possible explanations could be given for the general view on societal risk. The first is the fatalistic view that could be expressed: if one is sailing on the Titanic, one might as well go first class.

A second view is that "everyone else is doing it," why should I suffer? This perspective is especially true in societies where irresponsible, but sexually active, persons have children without being able to support them. Society is then placed in the regrettable position of protecting the child from suffering. In some areas, competition for control is leading groups to increase their own population in the hope of freeing themselves from domination by some other cultural or ethnic group.

The third view relates to the use of credit cards — gratification is immediate and consequences are postponed, although not for long. A number of other views of societal risk are possible, but these three are highly probable and not mutually exclusive.

The matter becomes more puzzling where individual risk is concerned. Geographer Charles M. Good (personal communication) is studying the incidence of sexually transmitted diseases (STDs) in Africa and in Southeast Asia. He finds that even when the risks are apparent, risky behavior continues. Many inhabitants of more developed countries continue to smoke cigarettes despite mounting evidence about the consequences. If individuals ignore warnings about personal risk, are they likely to pay much attention to Malthus?

Virtual Reality Graveyards

On December 22, 1997, the English language broadcast from Radio Japan carried a fascinating news item that space for burial could be acquired on the Internet. The Japanese respect and honor their ancestors and their final resting places, but burial sites in Japan are becoming extraordinarily expensive and, even then, difficult to acquire because of the aging population, the large size of Japan's population, and shortage of space. Apparently the Internet offers the ability to call up an image of the gravestone and grave site, together with a biographical sketch of the ancestor. One can also have one's own Internet tombstone, apparently with the names of the living color-coded differently from the names of the deceased. Additionally, the caring rituals, such as cleaning, leaving flowers, and other marks of respect, could be carried out on the Internet as in traditional graveyards on traditional gravestones. Furthermore, the burial site could be visited at any time, regardless of time of day, inclement weather, or amount of time available. One wonders whether the computer screen can produce the same aura evoked by real tombs and real graveyards and whether the location in one's home

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

will have the same effect as a particular geographic location with real burial sites. Japan and other Asian countries have already led the way in producing virtual reality pets, and one wonders whether the relationship of humans with nature will suffer the same transformation. The difference, however, is that human society may revere and respect its ancestors, may cherish its pets, but it is dependent on natural systems and their services. A computer screen may substitute, to some degree, in the emotional part of the relationship (although even this is questionable), but not in terms of the biophysical services provided. If human society cannot provide space for its deceased ancestors, held in much respect, is it likely that space for living individuals of other species will get serious attention if human society does not admit an interdependent relationship with these other species?

Economists

As a regular viewer of Rukeyser's *Wall Street Week in Review* on public television, I am frequently reminded that economists are often far off target; however, as Rukeyser himself notes, this shortcoming does not seem to diminish their followings appreciably. A healthy economy is necessary, and the general public seems to accept this claim universally. However, comparable statements about the well-being of ecosystems and their influence on human society are rarely made and generally not believed by the general public. Both economics and ecology have their share of individuals who, according to the ancient Chinese saying, "watch the sky from the bottom of the well" — referring to those having a very limited outlook or who are narrow-minded. As Wilson (1998b) notes, scientists often learn what they need to know in their specialized area, often remaining poorly informed about the rest of the system they inhabit. Doubtless, every profession has its share of highly specialized persons who are remarkably well informed about a very narrow area. Their research is often unintelligible to people in their own general field, except for a few kindred spirits. Most professionals are extremely reluctant to venture outside their area of high competence, either because the other areas are, in their view, less important or because they fear being less well informed and, thus, vulnerable to criticism. Certainly, making connections with other parts of their profession, other parts of science, and even, for some, with the rest of the world they live in, is considered professionally risky and, therefore, unacceptable.

Ecologists

Although the field of ecology as a formally recognized entity did not exist in Malthus' time, his writings have enormous ecological implications. Since ecology is a scientific field, it seems appropriate to examine Malthus' model with a scientific perspective — namely, an organized systematic enterprise that gathers knowledge about the world and condenses the knowledge into testable hypotheses and principles. Wilson (1998b) concisely states that some diagnostic features of science are useful in distinguishing it from pseudoscience.

(1) *Repeatability.*

Numerous instances have been documented of population crashes (resulting from exceeding carrying capacity) for other species. Diamond (1994) and Ehrlich and Ehrlich (1990) cite cases for human society also. Of course, at the global level, repeatability is out of the question — no control series of planets is available for testing, as would be necessary for many scientific experiments. However, microcosms and mesocosms can be used for some experiments. Island biography is especially instructive, which is why Diamond's writings are so persuasive.

(2) *Economy.*

Certainly Malthus attempted to synthesize information into a form that is both simple and aesthetically pleasing by using mathematics that could be followed by almost any literate person. Although his concept did not take into account the mechanization of agriculture and other components of the agricultural revolution, it was not invalidated by them.

(3) *Mensuration.*

Mensuration is the feasibility of being properly measured, using universally accepted scales. Since Malthus' time, particularly in the last century, the ability to study human population dynamics has improved enormously, and the numbers are rarely disputed. The consequences of the rate of population growth, rather than the actual numbers themselves, remain in dispute. Sewage treatment systems have become overloaded, water supply is short, schools are overcrowded, transportation

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

systems are clogged, and cost of land for housing in populous areas has risen. The only way to ignore such consequences is to assert that the carrying capacity for humans is unlimited, even though biophysical laws show that limits exist for other species.

(4) *Heuristics.*

Heuristics is the ability to stimulate additional research often in unpredictable new directions that, in turn, provides additional tests of the original hypothesis. The quest for goals and conditions that will facilitate sustainable use of the planet (which has received increased attention over the last decade) is one such new "direction." However, the effort is in such early developmental stages that it lacks substantive implementation for providing evidence of robust analysis because of too many fragmented viewpoints (e.g., discrete initiatives for sustainable energy, sustainable agriculture, sustainable transportation, sustainable cities, and the like).

(5) *Consilience.*

The explanations of different phenomena most likely to survive are those that can be connected and proved consistent with one another. This area is the least satisfactory and, arguably, the most crucial feature. Regrettably, as temporal and spatial scales and the level of complexity increase, the degree of uncertainty also increases appreciably. This scenario leads to challenges of experimental error, faulty science, political views masquerading as science, and the like. The fact that uncertainty exists about the consequences of particular courses of action does not mean that human society is free of risks until the uncertainties are diminished! Waiting for reduction in uncertainty could produce risks that, with 20/20 hindsight, would be clearly unacceptable. This area is probably the core of the population problem resolution. Any one who is intolerant of uncertainty must necessarily have a high tolerance for risk because the two are connected. Those who dispute Malthus focus on the uncertainty and minimize the risk. However, ignoring risk does not eliminate it, as human society has demonstrated over and over again. Perhaps this acknowledgment is why the film *Titanic* is so popular — it shows clearly the consequences of denying risk.

Conclusion

If humans are not exempt from the biophysical laws that limit other species, and they seriously impair the planet's ecological life support system beyond repair, then Malthus will be proven right at great cost to human society. Ecosystems are difficult to restore when many of the species that inhabited them have been driven to extinction. Even if Malthus is proven wrong, staying within ecologically sound limits will lead to the kind of life-quality that most people want. The rise in eco-tourism and other related activities (e.g., bird watching) indicate that many humans derive great satisfaction from a close relationship with natural systems. At the very least, human society should wait for more persuasive evidence that it is exempt from some natural laws before committing itself irreversibly to acting on the belief that it is so exempt. This stance requires paying more than token attention to limits of ecosystem abuse on a finite planet. TSC

ACKNOWLEDGMENTS

I am deeply indebted to Eva Call for skillful transcription of my dictation and incorporation of many revisions into this manuscript. As ever, my long-term editorial assistant Darla Donald has been extremely proficient in preparing the manuscript for publication. I thank my colleagues Alan Heath, John Tanton, and Bruce Wallace for comments on an early draft of this manuscript. John and MaryLou Tanton brought the Durants' book to my attention.

REFERENCES

Anonymous. 1998. Obituary: Julian Simon. *The Economist*, February:87.

Brown, L. R. 1995. *Who Will Feed China?: Wake-Up Call for a Small Planet.* New York: W. W. Norton & Co.

Cairns, J., Jr. 1992. "Ecosystem peril vs. Perceived, personal risk." *CHEMTECH* 22:24-27.

Cairns, J. Jr. 1993. "The intellectual electric fence." *Annals of the Earth*, XI(3): 17-18.

Cairns, J. Jr. 1994. "Ecological restoration: Re-examining human society's relationship with natural systems." The Abel Wolman Distinguished Lecture. Water Science and Technology Board, National Research Council, Washington, DC.

Cairns, J. Jr. 1996. "Determining the balance between technological and ecosystem services. In Schulze, P. C., ed. *Engineering Within Ecological Constraints.* Washington, DC: National Academy Press, pp.13-30.

Cairns, J. Jr. 1997a. "Global coevolution of natural systems and human society." *Revista de la Sociedad Mexicana de Historia Natural* 47:217-228.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Cairns, J. Jr. 1997b. "Commentary: Defining goals and conditions for a sustainable world." *Environmental Health Perspectives*, 105(11): 1164-1170.

Cairns, J. Jr. 1997c. "Sustainability, ecosystem services, and health." *International Journal of Sustainable Develop-ment and World Ecology*, 4:153-165.

Carson, R. 1962. *Silent Spring.* Boston: Houghton Mifflin.

Diamond, J. 1994. "Ecological collapse of ancient civilizations: The golden age that never was." *Bulletin of the American Academy of Arts and Sciences* 47(95): 37-59.

Diamond, J. 1997. "Paradises lost." *Discover* 18(11):68-78.

Durant, W. and Durant, A. 1968. *The Lessons of History.* New York: Simon and Schuster.

Ehrlich, P. R. 1968. *The Population Bomb.* New York: Ballantine Books.

Ehrlich, P. R. 1997. *A World of Wounds: Ecologists and the Human Dilemma.* Oldendorf/Luhe, Germany: Ecology Institute.

Ehrlich, P. R. and Ehrlich, A. H. 1990. *The Population Explosion.* New York: Simon and Schuster.

Ehrlich P. R. and Ehrlich, A. H. 1996. *Betrayal of Science and Reason: How Environmental Anti-science Threatens Our Future.* Washington, DC: Island Press.

Ehrlich, P. R., Ehrlich, A. H., and Dailey, G. C. 1993. *The Stork and the Plow: The Equity Answer to the Human Dilemma.* New York: Putnam.

Geller, S. E. 1994. "The human element in integrated environmental management." In J. Cairns, Jr., T. V. Crawford and H. Salwasser, eds. *Implementing Integrated Environmental Management.* Blacksburg, VA: Virginia Polytechnic Institute and State University.

Geller, S. E. 1996. *The Psychology of Safety.* Radner, PA: Chilton Book Company.

Hardin, G. 1968. "The tragedy of the commons." *Science* 162:1243-1247.

Hardin, G. 1972. *The Voyage of the Spaceship Beagle.* New York: Pelican Books.

Hardin, G. 1993. *Living Within Limits.* New York: Oxford University Press.

Hawken, P. 1993. *The Ecology of Commerce.* New York: Harper Business.

Himmelfarb, G. 1998. "The ghost of Parson Malthus." [London] *Times Literary Supplement*, January 23, pp.4-,5.

Janzen, D. H. 1984. "The most coevolutionary animal of them all." Craaford Prize Lecture. The Royal Swedish Academy of Sciences, Stockholm, Sweden.

Kinne, O. 1997. Introduction. Page XI, in P. R. Ehrlich, *A World of Wounds: Ecologists and the Human Dilemma.* Oldendorf/Luhe, Germany: Ecology Institute.

Leopold, A. 1966. *A Sand County Almanac, with Essays from Round River.* New York: Ballantine Books.

Leopold, L. B. 1990. "Ethos, equity, and the water resource." *Environment* 32(2): 16-42.

Lubchenko, J. 1997. "Entering the Century of the Environment: A New Social Contract with Science." Presidential address, February 15. American Association for the Advancement of Science, Seattle, WA.

Lutton, W. and Tanton, J. 1994. *The Immigration Invasion.* Petoskey, MI: The Social Contract Press.

Meadows, D. H., Meadows, D. L., and Randers, J. 1993. *Beyond the Limits: Confronting Global Collapse, Envisioning a Sustainable Future.* White River Junction, VT: Chelsea Green Publishing.

Myers, N. and Simon, J. 1994. *Scarcity or Abundance: A Debate on the Environment.* New York: W. W. Norton.

Orr, D. W. and Ehrenfeld, D. 1995. "None so blind: the problem of ecological denial." *Conservation Biology* 9(5): 985-987.

Postel, S. L., Daily, G. C., and Ehrlich, P. R. 1996. "Human appropriation of renewable fresh water." *Science* 271:785-788.

Prosterman, R. L., Hanstad, T. and Ping, L. 1996. "Can China feed itself?" *Scientific American*, Nov:90-96.

Rohe, J. F. 1997. *A Bicentennial Malthusian Essay: Conservation, Population and the Indifference to Limits.* Traverse City, MI: Rhodes and Easton.

Sagan, C. 1994. *Pale Blue Dot: A Vision of the Human Future in Space.* New York: Random House.

Schneider, S. H. and Londer, R. 1984. *The Co-Evolution of Climate and Life.* San Francisco, CA: Sierra Club Books.

Union of Concerned Scientists. 1992. *World Scientists' Warning to Humanity.* Cambridge, MA.

Wilson, E. O. 1993. "Is Humanity Suicidal?" *The New York Times Magazine*, May 30:24-29.

Wilson, E. O. 1998a. "Resuming the enlightenment quest." *The Wilson Quarterly*, Winter:16-27.

Wilson, E. O. 1998b. "Scientists, scholars, knaves and fools." *American Scientist* 86:6-7.

Wilson, E. O. In press. *Consilience: Unity of Knowledge.* New York: Alfred A. Knopf Publishers.

World Commission on Environment and Development. 1987. *Our Common Future.* Oxford: Oxford University Press.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

A Post-Malthusian View of Malthus

Are we as reticent about solutions as he was?

by Lindsey Grant

Two hundred years after the first publication of Malthus' great Essay is an appropriate time to undertake a new evaluation of a man who was remarkably prescient and in many ways modern. But he was also a prisoner of his time, as we are prisoners of ours. What does he have to say to us now?

The Malthusian Trap: Population and Food.

The modern population debate really began in the 1790s with three writers: On one hand, the utopians Condorcet and William Godwin, who thought human ingenuity was capable of solving all problems and that growth was therefore essentially unlimited; and on the other hand the English clergyman and economist Thomas Robert Malthus, who said that "the power of population is indefinitely greater than the power in the earth to produce subsistence for man. Population, when unchecked, increases in a geometrical ratio. Subsistence increases only in an arithmetical ratio." Malthus later amplified the phrase "when unchecked" by discussing the different checks on population growth. (I will come back to that modification.) He is most remembered, however, for that original stark assertion.

> How does the human race find humane ways to manage our own fertility so as to stay in harmony with the environment?

Condorcet and Godwin are pretty much forgotten, though faith in the myth of perpetual growth continues unabated. Malthus is still being debated, with Condorcet's intellectual heirs saying "look; it didn't happen" and neo-Malthusians saying "maybe not yet."

The difference of opinion is rooted in a difference of time horizons and in the role of technology. Neo-Malthusians generally would admit that Malthus envisaged a closed system and did not see the tremendous importance of the New World in offering new lands, accepting migration and taking the pressure off Europe. His second failure was his linear arithmetical model of food production. He envisioned sustained growth in output only by opening new land (though he admitted a limited role for mulching). In an era when yields varied mostly with the weather and the quality of the land, he did not foresee that technology, cheap energy, fertilizer and artificial pesticides could raise yields geometrically. If science and technology had not succeeded in raising yields as they have in the past half-century, nobody would be questioning Malthus now. These techniques have deferred Malthus' prediction but not necessarily vitiated it. There are disquieting signs that that run of success is coming to an end; yields are tending to plateau, pests' resistance to pesticides is growing. Malthus may be on the way to vindication. Beyond that, as I will later describe, the technologies themselves raise issues more serious than even Malthus imagined.

The Solution Malthus Missed

To stop with Malthus' broodings about the consequences of population growth is to slight the issue that has polarized the debate about Malthus and indeed about population policy: what, if anything, can be done about it? At the beginning, Malthus' answer was: "very little."

***Lindsey Grant** is a writer on population and the environment and a former Deputy Assistant Secretary of State for Environment and Population Affairs. His e-mail address is lgrant@ibm.net.*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

In the first (1798) version of his essay, he recognized both "preventive" and "positive" checks on population growth. The positive checks were the limits imposed by hunger, disease and war, or "misery" as he categorized them. The preventive check was deliberate management of fertility. Ordained minister that he was, Malthus had a straightforward (and rather appealing) view of a virtuous life: early marriage and fidelity to a single wife, which led naturally to many children. He recognized delay and avoidance of marriage as "preventive" controls on population, driven by the wish to preserve one's standard of living, but he did not applaud them. He was strangely ambivalent. Having described in sympathetic terms why people may seek to avoid having children, he went on to warn of the "vicious habits" that resulted from abstinence. He made veiled references to debauchery, "vicious customs with respect to women" (prostitution, presumably), "unwholesome manufactures" (the condom had recently been invented) and probably he was thinking also of homosexuality. He was studiously vague (in deference to the conventions of the period) but when he summarized the checks on population growth, he lumped them into two categories: "misery or vice." In other words, the usual ways of diverting the procreative urge are vicious, and there is no acceptable way of avoiding the trap.

Others before him had observed the tendency of populations to rise in favorable periods and then to crash or stop growing in bad periods, but Malthus gave the systematic explanation. He was seized with a brilliant insight, but he carried it too far. He had identified in humans what Darwin shortly thereafter generalized into the cornerstone of the theory of natural selection: that any species, to be successful, must be more fecund than its habitat can support. It is that margin of fecundity that enables the species to move into new niches or adapt to changes in its environment, but failing those opportunities the excess fertility is doomed to die off for lack of food or as prey for other species. Darwin propoun-ded the theory of evolution to explain that process. Malthus did not carry it so far, but he promoted a tendency into an absolute. He slighted the ability of humans to foresee consequences and to regulate fertility to achieve perceived benefits such as a better standard of living.

"Preventive checks" — deliberate family planning — were practiced long before Malthus. Even as he wrote, there was practical evidence that the "Malthusian trap" did not operate so absolutely as he thought. The Renaissance followed the Black Death in part because, mortality having reduced the European population sufficiently to escape the trap, Europeans were not willing to return to the subsistence levels that characterized the preceding centuries. There was some surplus, which supported the arts and civilization we associate with the Renaissance. The shortage of labor, in fostering the development of labor-saving devices, prepared the way for the Industrial Revolution, which was gathering force and was financing the importation of New World grain as Malthus wrote.[2] French peasants, given title to their lands by Napoleon, limited their offspring so as to pass on their holdings intact. Coupled with emigration, such adjustments spared Europe from famine even before the systematic rise in crop yields that started in this century. (The terrible exception was the 1848 famine in Ireland, which took place, significantly, in a peasant economy little affected by those changes.)

Malthus himself described such behavior and its results, but he did not seem to recognize its prevalence and its potential, and he could not bring himself to advocate artificial birth control. He thus failed to provide, himself, the answer to the problem he had posed.

The Legacy of the Poor Laws

Starting in 1803, Malthus revised his essay in seven successive editions, and it grew far longer. He explicitly sought to "soften some of the harshest conclusions of the first Essay." He added a third check, "moral restraint," to misery and vice. He did not define it precisely, but the central idea was that couples should delay marriage until the husband was able to support the resulting children, abstaining from sex until then (avoiding "vicious" practices) by keeping marriage as the ultimate goal. The change in tone is more cosmetic than real. Malthus recognized the policy option but he was still unable to shake his distaste for contraception or any other means of limiting fertility, other than the uncertain hope for "moral restraint." Caught in his own morality, and unable to promote those "evil" behaviors, he sought to solve the problem by exploring other ways in which fertility could be held down.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

We see in his writings the rational philosopher matched against perhaps the strongest of all human drives. He made all the right arguments. He proposed the gradual change of institutions that "directly encourage marriage," particularly at an early age. He recognized that improved living conditions led to lower fertility, and he explored various ways in which agricultural earnings could be raised. Most fundamental of all, he sought to convince the poor that "the withholding of the supplies of labour is the only way of really raising its price, and that they themselves, being the possessors of this commodity, have alone the power to do this." (It is a lesson our modern politicians have still to learn when they promote free trade with nations in which labor costs perhaps $1 a day, or pass immigration laws that promote the mass entry of unskilled workers to compete with our own poor for a diminishing pool of low-skill jobs.)

"The effect of the Poor Laws, Malthus argued, was to increase the demand for food without increasing its supply."

He was expecting a great deal of the "poorer classes." He knew it and, far ahead of his time, argued for universal education to help the poor understand where their interests lie. This led his opponents to charge him with proposing to educate the poor to read the insidious writings of Tom Paine. Not a bad idea.

Even so, Malthus recognized that education would not reach all the poor, and this led him to a proposal that caused many humanitarians — from then till now — to attack him as the Devil incarnate. He proposed the gradual abolition of the Poor Laws, which since Elizabethan times had provided a bare subsistence for the desperate. The tax burden of those laws had been rising dramatically, and he argued that the worthy who had no more children than they could support were being impoverished to support the unworthy poor who, fed by society, continued to procreate. The effect of the Poor Laws, he argued, was thus to increase the demand for food without increasing its supply.

"With regard to illegitimate children," he said, "after the appropriate notice had been given, they should not be allowed to have any claim to parish assistance, but be left entirely to the support of private charity. If the parents desert their child, they ought to be made answerable to the crime. The infant is, comparatively speaking, of little value to the society, as others will immediately supply its place."

That harsh language generated a firestorm of criticism that has yet to abate. The attack was undoubtedly humane in intent, but, in part the result of ignorance; his opponents had not grasped the force of his argument about the population-food balance.

Malthus' detailed proposal was more humane than that passage suggests — and less consistent. He also proposed "for cases of extreme distress, county workhouses... supported by rates on the whole kingdom and free for persons of all counties, and indeed of all nations." He assumed that, if the conditions were harsh enough, people would not have children, but he never attempted a proof; modern experience (e.g. in China) suggests that that threshold is very low indeed. He also offered another proposal: that society should provide "a place where any person, whether native or foreigner, might do a day's work at all times and receive the market price for it." A surprisingly modern idea, but he never did show why such a system might not lead to precisely the population-food trap he had earlier described.

Given his reservations about birth control, his proposal to end most governmental charity was perhaps the only way in which his broader purpose could be achieved. Still, he was a tough man with a tough sell, and his view of the Poor Laws has colored all subsequent memory of the man.

A Revisionist View of Malthus

This whole debate is still very much with us, and the modern population movement is justified in revising Malthus in major ways:

- Malthus described the trap, eloquently. The point now at issue is how to promote conscious action — the human intelligence at work — to escape it. Malthus was torn. We can see the choice much more clearly. It is a great

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

opportunity, if humans have the wisdom and the discipline to use it. We recognize that family planning, reinforced by abortion as a necessary final resort, is an integral element in achieving the purpose we share with Malthus.

- Fertility is a critical social issue, but it must be reconciled with a modern sense of respect for the individual. We must offer a much more extensive exploration of the forces and calculations — the incentives and disincentives that influence fertility — than Malthus undertook. That point gets less attention than it deserves, even now. The descendants of those who do not heed the population argument will gradually supplant the descendants of those who do — and in the process raise overall fertility. Perhaps those descendants of the fertile will come to understand the overpopulation message, but it is not a good bet. If the message is not to be self-defeating, therefore, everybody must believe that family planning benefits them, now.

"There ... should be a fusion of the interest of the population movement with the environmentalists."

Expectations and the Role of Women

But how do we sell the idea? Malthus saw the dilemma, but he could not find a humane way to achieve a humane purpose. Are we still not caught on the dilemma of finding ways in which the fertile will recognize their own self interest, without starving them or their innocent children to do it?

The immediate answer may lie in an idea that appeared several times in Malthus' writings: "there appears to be something like a standard of wretchedness, a point below which they (the poor) will not continue to marry and propagate their species. This standard is different in different countries... The principal circumstances which contribute to raise it are liberty, security of property, the diffusion of knowledge, and a taste for the comforts and conveniences of life." In other words: raise human expectations. If people learn to believe that a better life is possible for them, and that too many children will make it impossible, they will listen to suggestions as to how to limit fertility. In most respects, his list is a very modern one.

In one regard, however, Malthus' writing sounds odd to the modern ear. He discussed fertility at great length with very little mention of the women who bear the children. That has all changed. There have been many investigations of the negative correlation between various indicators of women's status and their fertility: legal rights; educational levels; property rights; job opportunities. I believe they are all surrogates for a more fundamental change in women's perspective. They are coming to a sense of self-worth; they seek opportunity to find expression in a job or otherwise; and they are learning that they can control their own fertility. These attitudes can be promoted, perhaps much more directly than some recent declarations (e.g. the Cairo Programme of Action of 1996) would suggest. Show women the alternatives (they see evidence of a better life on television every day, anyway). Make the means available and affordable. Let women know they are there. And encourage policies that promote entry-level jobs. When it begins to catch on, fertility management achieves a certain majesty. The evidence lies in the recent fertility trends in the "emerging nations" now modernizing.

Excess fertility is hardly a problem in the industrial world right now. The opposite phenomenon — fertility too low to maintain the population — looms as a coming issue. When it becomes an issue will depend upon attitudes, explicit or consensual, as to what population level leads to an optimal way of life — and upon the degree to which industrial societies are willing to see their descendants replaced by third world immigrants and their descendants.

Whether high or low, fertility thus becomes a social issue, not just a question of individual choice. There is no automatic connection between women's decisions about their own fertility and the social good.

Beyond Malthus

The population issue is larger than Malthus realized.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Neo-Malthusians, although they may temper Malthus' conclusion, tend to be focused as he was mostly on the issue of food. It is not enough, however, simply to pursue the question whether Malthus was right. At this point in history, we should look beyond that single-track debate. Scientific success has brought in its train a series of issues unimaginable to Malthus, but which make the prospect of growing populations much more ominous than he realized. Yields have been raised by techniques he could never have dreamed of. The biosphere, properly seen, is a fragile film upon the earth's surface. We have learned to make fertilizer from nitrogen that had been inert in the atmosphere — and inject it into the biosphere in highly active compounds. We extract carbon, sulphur, potassium and phosphorus from the lithosphere — and inject all of them into the biosphere. We are only beginning to comprehend the conse-quences: air and water pollution, acid precipitation, nitrogen saturation of forest soils, eutrophication of our water sources, climate warming and mysterious changes in the oceans. We are learning that the earth is an interconnected web, and our sense of the breadth of the issues posed by population growth has expanded immeasurably.

These consequences of population growth did not occur to Malthus or his adversaries. They were concerned only about human nutrition, not about the health of the biosphere. There now is, or should be, a fusion of the interest of the population movement with the environmentalists. The issue goes much beyond Malthus. We must break the widespread addiction to the myth of perpetual growth in the face of the scientists' evidence of its catastrophic consequences.

Malthus saw increased consumption as a "preventive check", not as a threat. We can agree with Malthus that a higher standard of living for the poor helps them to seek lower fertility, which in turn reduces poverty. Moreover, the poor of the world (or the rich, for that matter) are hardly likely to embrace austerity, and the poor are right. Now, however, we must address the environmental issue. Population and consumption are locked variables. They are inversely correlated. Other things being equal, one must decrease if the other increases, or environmental damage will rise. There is just one way to reconcile the social goal with environmental goals: population policy. Reducing fertility is both a protection for the environment and a self-reinforcing demographic process — a positive feedback loop, in the modern jargon.

Having gone far beyond Malthus' intellectual framework, the population movement should perhaps call itself "post-Malthusian" rather than "neo-Malthusian."

This shift of emphasis should be seen as an extension of Malthus' writings, not a rejection of them. Despite his limits, Malthus identified the issue which is likely to be central for humankind for the next few decades. To state it in revised terms: Which of the two geometric growths — agricultural output or demand — will continue, and how fast? and what will be the impact of that race, with its deployment of chemical fertilizers and pesticides, upon the rest of the natural systems that support us? Food still seems likely to be the immediate limiting factor for the growth of human populations. If he did not show the way out of the trap, his ghost may legitimately claim that he identified it, and that was his profound contribution to the study of population.

Negative Population Growth

Our new awareness of the environment thus raises a staggering issue which lies athwart the "solution" of rising expectations. What happens if everybody "succeeds?"

The United States consumes about 800 kilograms of grains per capita each year, including that used for animal feed. More modest consumers such as Italy and Taiwan consume about 350-400 kilograms. If everybody, worldwide, could afford that more modest supply level, and if we use the UN middle population projection, the total world demand for grains would rise about 75 percent by 2050 and would double by late in the 21st century, at which time world population would stop rising. (It could be much worse; the UN projection assumes rapid progress toward lower fertility.) The newly prosperous countries will be competing for food, in a world market that cannot accommodate them. There are present or looming problems of declining acreage, salinization of irrigated fields and the increased competition for water, pests' growing resistance to pesticides, the diminishing response of food plants to the efforts to raise yields, and the growth of population in the food exporting countries, that make it uncertain whether world food

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

availability will hold its own, to say nothing of rising to accommodate the rising demand.

Food is connected with population in a particularly inelastic way. Population growth must be stopped and reversed to avoid a looming food crisis.

Even more dramatic growth is foreseen in the overall level of economic activity. Can the environment stand prosperity? The "Brundtland Commission" in 1988 concluded that, in fairness, we must anticipate a five- or ten-fold growth in world industrial output to accommodate the modernization of the less developed countries.[3] The International Panel on Climate Change (IPCC) forecasts a seven-fold rise in world GDP by 2050 (i.e. average per capita GDP worldwide rises to the present industrial world level) and 25-fold by 2100. Those estimates epitomize the problem of trying to relieve poverty for a growing world population. It is inconceivable to me that, even with the best efforts at pollution control and conservation strategies, anything like that growth would be environmentally tolerable, and there is yet no sign that countries will make their best efforts.

Take the greenhouse effect as an example: the developed countries are talking (so far with no success) of bringing their CO_2 emissions back down below the 1990 level. The developing countries won't commit themselves. The IPCC represents the best scientific advice available. It concludes that a 50 percent to 70 percent decline is needed right away, with further declines later, simply to hold the climatic impact of human activity to its present level — in the face of a seven-fold increase in world economic activity in the next half century. Impossible. Either the economic growth won't take place, or climate warming will accelerate.

Climate change and air pollution are driven partly by fossil energy use. Third world countries will need more energy to fuel their industry and to meet the expectations of their people. The U.S. Energy Information Administration (EIA) points out that China and India, although they represent only 12% of total world energy demand, "accounted for over 30% of the world's increase in energy use between 1980 and 1993."[4]

Let us use Asia (excluding Japan and the former USSR) as a surrogate for the emerging nations. The EIA expects Asian energy needs to double from 1990 to 2010, even with a sharp slowdown in growth rates and a dramatic improvement in energy efficiency. At that rate, their needs will pass present total world energy consumption in 2045. If they grow as they have been growing since 1970 and don't become more energy-efficient, they will get there in 2027. If the energy is available, that sort of growth will multiply the damage that fossil fuels presently inflict on the environment.

The EIA has done an interesting exercise. If the rest of the world had reached the industrial countries' level of per capita energy consumption and energy efficiency in 1990, total world energy consumption would have been three times the actual level in that year.[4] As a sort of "best and worst case" scenario, population growth alone would run that growth up to more than 5:1 by 2050 (UN 1996 medium projection). Not likely, but a useful measure of the potential problem. Some dramatic combination of energy and population policies will be needed to arrest the environmental damage.

A similar prognosis holds true for acid precipitation, nitrogen production, forest and fishery resources, water availability in dry regions and indeed most of the environmental issues facing the world.

A "European" standard of living is the explicit or implicit goal of the emerging countries. The problem is that the dream is unattainable for all but a few, even if there were monumental efforts at efficiency and conservation and a rapid move out of fossil fuels. At some point, not very far away, the emerging nations will recognize that they cannot pursue the growth pattern on which they have embarked, because food shortages, energy scarcity, environmental horrors and eventually the fact of climate change will conspire against them. Or they will be increasingly divided between a small rich minority and hungry masses. One can hardly predict how those conflicts will play out, but we may anticipate a less and less stable world until growth policies are reconciled with environmental limits and population policy is made a key element in the solution. The point I made earlier comes back into focus: expectations are rising, but you cannot anticipate rising living standards for a rising population. The solution is to turn population growth around, but that will take time even with the best of intentions.

This whole argument is beyond Malthus. He

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

remarked that "the increase of absolute population... will of course take place." And he was right, in 1803, when world population was less than one billion.

The idea of negative population growth sounds revolutionary to ears accustomed to the belief in growth. It is a circular solution that solves many problems at once. With the long term prospect of fewer people, adequate food and higher living standards become possible. The process itself, by fostering fewer children in each generation, makes realistic the dream of better education, and then job opportunities, for all. It would mitigate the environmental damage of fossil energy use and extend its potential life. And finally, it would constitute the ultimate reversal of the "Malthusian trap." The dynamics of population would make rising individual consumption possible, and at some point the excess productive capacity of the land would permit the reversion to sustainable farming practices that would assure the continuation of that happy state. Applying Malthus' calculation in reverse might, with a sufficient advance in morality, finally make realistic some of the utopian dreams of a cooperative society envisaged by men like William Godwin who so fiercely castigated the living Malthus.

The anti-Malthusians

Perhaps Malthus' greatest misfortune was his own morality, which was the morality of his time. One hardly thinks of Malthus as ambivalent, but he was. He saw the solution in rough outline: "Finding, therefore, from the laws of nature we could not proportion the food to the population, our next attempt should naturally be to proportion the population to the food. If we can persuade the hare to go to sleep, the tortoise may have some chance of overtaking her." But he drew back from critical parts of the solution. One wonders how the debate would have gone if he said to Godwin: "Listen, I like your dream, but here is what will block it... and here is how to remove that block." Godwin might have been astonished at the solution, but on the other hand both might have come to recognize its necessity.

Similarly, his current opponents, lost in furious excoriation of Malthus, have failed to see his real contribution. In doing so, they lose the opportunity to explore with the population community a question to which we do not yet have a complete answer, but which will be a central issue for the indefinite future: how does the human race find humane ways to manage our own fertility so harmony with the environment that supports us?

The population community from time to time points out that the alternative is to let environmental damage and rising mortality do it for us. But that warning encounters hostility from every quarter:

- from the religious Right, the Vatican, and the "right to lifers" who claim the right to decree whether and when and by what means others shall be allowed to regulate fertility;
- from those on the other side who oppose any proposal to influence women's free choice to decide "what to do with their own bodies";
- from businessmen promoting immigration to provide a supply of cheap and docile labor;
- from misguided humanitarians who lose sight of the needs of their poor fellow-countrymen and their own descendants.

"...negative population growth sounds revolutionary to [those] accustomed to belief in growth..."

The scope of the population argument may have advanced beyond Malthus, but not the self-righteous fury of his opponents. That very fury may be a reflection of something they do not want to admit: that the population issue imperils their fundamental beliefs.

Karl Marx called Malthus a "miserable parson" guilty of spreading a "vile and infamous doctrine, this repulsive blasphemy against man and nature." But at least he admitted the reason. The *Encyclopedia Britannica* observes that "[f]or Marx, only under capitalism does the dilemma of resource limits arise... The strident nature of Marx's attack upon Malthus' ideas may have arisen from his realization that they constituted a potentially fatal critique of his own analysis. 'If [Malthus'] theory of population is correct,' Marx wrote in 1875 in his *Critique of the Gotha Programme*... 'then I cannot abolish this [iron

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

law of wages] even if I abolish wage-labor a hundred times..."[6] That time, Marx was right.

Malthus had one immense virtue. He did not deny a problem because it was a problem. If his opponents would look as squarely at population, they would discover that they share an interest with the population community. A better future requires that humankind consciously manage our species' congenital drive to procreate beyond the capacity of the earth to support us. Perhaps we rather than they are the true optimists, because we suggest how to escape from a mathematically impossible expectation: unending growth on a finite planet.

TSC

NOTES

[1] *Population*, the 1798 version (University of Michigan Press, 1959), p.5. The quotations from the revised version are taken from Philip Appleman, ed., *An Essay on the Principle of Population* (New York: W. W. Norton & Company, 1976). The other data in this article are drawn, except where noted, from my book, *Juggernaut: Growth on a Finite Planet* (Santa Ana, CA: Seven Locks Press, 1976).

[2] For a fascinating summary of the relevant history, see David Herlihy, *The Black Death and the Transformation of the West* (Harvard University Press, 1997), especially pp.39-57. See also John Larner, *Culture and Society in Italy, 1290-1420* (London: B.T. Batsford, 1971), pp.122-145 and 237-240 for the direct evidence; the discussion of "Changes in Art," pp.141-147 is suggestive of the intellectual impact. See also John A. Garraty and Peter Gay, *The Columbia History of the World* (New York: Harper & Row, 1972), p.487.

[3] UN World Commission on Environment and Development (or Brundtland Commission" for its chair, Gro Harlem Brundtland, Prime Minister of Norway), *Our Common Future* (Oxford: Oxford Univ. Press, 1987), p.213.

[4] U.S. Department of Energy (DOE), Energy Information Administration (EIA), *International Energy Annual 1993*, p.viii.

[5] EIA, *International Energy Outlook 1995*, figure 3.

[6] *Encyclopedia Brittanica, 1997* (CD version) "Population Theories: Marx, Lenin and their followers."

A CHRONOLOGY OF THE REV. THOMAS ROBERT MALTHUS

1766 Malthus is born February 13 in Surrey, England, the sixth of seven children

1784 Enters Jesus College, Cambridge, where he studies the classics, moral and natural philosophy, and mathematics

1788 Graduates from Cambridge with honors in mathematics

1789 Made a deacon in the Church of England and curate of Okewood Chapel in Surrey

1791 Takes the MA degree at Cambridge; ordained a priest in the Church of England

1793 Elected a Fellow of Jesus College

1796 Writes "The Crisis," a political pamphlet never published

1798 Publishes *An Essay on the Principle of Population* anonymously

1799 Travels to Scandinavia and Russia

1800 Publishes first economic pamphlet, *An Investigation of the Cause of the Present High Price of Provisions*

1802 Tours France and Switzerland

1803 Publishes second, much enlarged edition of the population essay (further editions in 1806, 1807, 1817, and 1826); made rector of Walesby, Lincolnshire, with life income

1804 Marries cousin Harriet Eckersall; their first child, Henry, is born

1805 Appointed Professor of History and Political Economy at the East India College (Hertfordshire)

1806 Daughter Emily born

1807 Publishes *A Letter to Samuel Whitbread*; daughter Lucy born

1811 Malthus opens the most notable correspondence in the history of economics with David Ricardo; their friendship thrives until Ricardo's death in 1823

1814 Publishes *Observations on the Effects of the Corn Laws*

1815 Publishes *An Inquiry into the Nature and Progress of Rent* and *The Grounds of an Opinion on the Policy of Restricting the Importation of Foreign Corn*

1820 Publishes *Principles of Political Economy*, intended to rival Ricardo's *Principles* (1817)

1821 Publishes *The Measure of Value, Stated and Illustrated*; contributes "Population" article to the *Supplement to the Encyclopaedia Britannica*

1827 Published *Definitions in Political Economy*

1830 Reissues a large extract from 1823 "Population" article as *A Summary View of the Principle of Population*

1834 Dies at Bath, England; buried in Bath Abbey

1836 Second edition of *Principles of Political Economy* is published posthumously

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

The Rev. T. R. Malthus

The man, the myth, and what he really said

by Jack Parsons

[*By the early 1970s, Jack Parsons had become very concerned about widespread ignorance and gross misrepresentation of Malthus' works, frequently reinforced by vilification — from both Right and Left — of that author as a person. In an attempt to kickstart a process of rehabilitation of the man and his writings, in 1977 Parsons wrote a pair of articles for People, then the house-organ of the International Planned Parenthood Federation. With only minor changes, and acknowledgments to the IPPF, these are here reprinted as a single article: "Malthus: the Man Behind the Myth," People, Vol. 4, No.3, pp.23-24 and "What Malthus Really Said," People, Vol.4, No.4, pp.29-30.*]

Why are people still denouncing Malthus after nearly two centuries? No one attacks the phlogiston theory any more, Bergson's life-force, or scores of other old theories, yet practically the whole of an issue of Europe's *Regional Information Bulletin* was devoted to a two-fold attack on Malthus. Bonar says of him, "He was the 'best-abused man of the age...' and this might still be true: could it be that there is life in the old dog yet?"

Of course most of the diatribes are nominally directed at Malthus' population theory — or what is *imagined* to have been his theory (hardly anyone troubles to read what he actually wrote) but in fact the arguments are often *ad hominem*, the author is made to appear such a monster of depravity that every word emanating from his pen must be tainted with a poison more deadly than the curare on the primitive tribesman's arrowhead.

Whatever the merits and demerits of his population and other theories (he wrote widely and on many topics) he was, according to his contemporaries, friend and enemy alike, someone with many endearing and indeed noble qualities of mind and character. Far from being the ruthless apologist for capitalist exploitation, the "...apostle of private property..." as Petric called him in the IPPF *Bulletin*, he was a "dangerous" liberal with radical views on many social topics. Let us take a brief look at some of the human dimensions of this controversial figure.

As a Child...

He was born on February 14, 1766, at the family house, "The Rookery," between Dorking and Guildford. His father, Daniel Malthus, was a very unusual and distinguished man, an optimist, reformer and author, a friend and ally of the radical French intellectual, Jean Jacques Rousseau, and the Scottish philosopher David Hume. Robert suffered from a hare lip and cleft palate and so had a marked speech impediment but in maturity his voice was said to be pleasing to the ear.

His childhood seems to have been extremely full and happy, the father devoting much time and energy to the education and individual development of his children in accordance with the liberal theories expressed in Rousseau's *Emile*.

Malthus went away to school from 1776 to 1782 where he was a pupil, one of about 40, of Robert Graves, the Rector of Claverton, near Bath, who affectionately called his brilliant pupil "Don Roberto" (his family nickname later became institutionalized as "Old Pop"). After school and before going up to Cambridge, he was coached for a time by a Unitarian minister who either instilled into him or fostered an already strong religious sense. Professor Empson later said of him in this connection: "...he was a clergyman, ...conscientious, pure, and pious. We never knew one ... so entirely free from the vices of his caste." (James, p.14).

As a Family Man

His population theory called for maturity and economic viability before marriage and he certainly

***Jack Parsons**, in retirement, is Visiting Lecturer at the Sir David Owen Population Center at the University of Wales at Cardiff. His best-known books are* Population Versus Liberty *(1971) and* Population Fallacies *(1977). Soon to be published is an extensive volume on* Human Population Competition. *He will welcome comments at parsonsj2@cardiff.ac.uk.*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

practiced what he preached, postponing his own wedding to Harriet Eckersall until he was 38. Malthus believed that love and the sexual drive were among man's highest gifts: (Again a central part of his population theory.)

> *After the desire for food, the most powerful and general of our desires is the passion between the sexes... Of the happiness spread over life by this ... very few are unconscious. Virtuous love ... seems to be ... the most powerfully calculated to awaken the sympathies of the soul and produce the most exquisite gratifications. Perhaps there is scarcely a man, who has once experienced virtuous love ... who does not look back to that period as the sunny spot in his whole life...* (Fogarty, 2, p.154).

Again he seems to have practiced what he preached and by all accounts he was a very happy, devoted and tender husband and father. They had three children, one son, Henry, born prematurely only 10 months after they were married, and two daughters, Emily, born in 1806, and Lucy, in 1808, who died after a "rapid decline" at the age of 17. The slander that while preaching restraint he had 11 children himself is repeated even in the Fogarty edition of the second *Essay*, published in 1958.

"Virtuous love seems most powerfully calculated to awaken the sympathies of the soul and produce the most exquisite gratifications."

As an Adult...

Perhaps the best source of material on Malthus the man is his travel diaries, not intended for any reader other than himself. They were laid aside after use, lost, and not published until 1966 after their recent rediscovery. Some are still missing but those extant show that he was interested in everything and everybody. Leaving aside his population observations and economic statistics the following few brief extracts are typical of the author's style and character.

In Hamburg: "The little girl who shew'd us the church had a very pretty face, and a most pleasing countenance, particularly when she said in her German, I don't understand you." (P.35).

In Holstein: "We were particularly struck by the neat and cleanly appearance of the peasantry and the goodness of the houses (and) there is the most perfect freedom of opinion..."

In Sweden: "Went into some saw mills, and were pleased with the simplicity of the machinery..." (p.76).

In Norway: "At dinner (in Christiana) I sat by a Mrs. Skilstrop who had been married only ten days to a young physician.... She had a most elegant person and a very pretty face, and something so particularly naive and pleasing in her manner that before the evening was over both Otter and myself were half in love with her." (P.108).

The diaries were crammed with similar observations about all manner of subjects but clearly what interests him most is the state of the people.

The testimony of all who knew him bears out the self-portrait he unwittingly gave in the diaries. According to Bishop Otter he had a great "...taste for humor ... and a sense of infinite delight and pleasantry to his companions ... (which) ... often set the table in a roar...." (James, p.3).

He was fond of food and wine, in strict moderation, enjoyed music and the theater, both straight and comic, and he had a go at popular dancing on social occasions, although he thought that he "...made but a poor figure at the Walse." (James, p.108). He enjoyed a day's shooting occasionally but seems to have liked it more for the fact that it brought him close to nature rather than for the thrill of the chase. He loved the countryside and waxed lyrical over the beauty of meadow and mountain, river and lake, and, not least, his garden at Haileybury:

> *...This house is in a cluster of tall shrubs and young trees, with a ... smooth lawn sloping to a bright pond, in which old willows are dipping their hair, and rows of young pear trees admiring their blooming faces....* (Bonar, p.420).

In more serious vein, Francis Jeffrey, lawyer, MP and man of letters — now chiefly remembered as the founder of the *Edinburgh Review* — wrote to him:

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

God bless you, my dear Malthus. I have long been accustomed to quote you as the very best example I know of a wise and happy man.

His young colleague at Haileybury, Professor William Empson, said of him:

...as for hating, Mr. Malthus could hate nobody — which, considering the strength of his feelings, ... and the provocations ... he was perpetually receiving, was almost as wonderful a circumstance, as that anybody could be found capable of hating him. (James, p.13).

What is so remarkable about Malthus is that many of his strongest opponents also recognized his personal qualities, possibly something unique in the history of intellectual controversy. Both Marx and Engels spoke well of him on occasion, and the leader of the opposing school of thought, William Godwin, said of him:

...he has labored to excite neither hatred nor contempt against me or my tenets; he has argued the questions between us. For myself, I cannot refuse to take some pride in so far as by my writings I furnished an incentive to the producing (of) so valuable a treatise! (Bonar, p.359).

As a Radical...

Most people interested in ideas have spent so much time and energy denouncing Malthus' alleged population theory that they have not even noticed his social radicalism. Here are a few brief examples.

As an ordained clergyman he accepted, more than half a century before Darwin, that man is a member of the animal kingdom, subject to its basic laws, and rejected the Christian belief in eternal punishment for sinners in Hell. He accused the upper classes and the government of cheating the masses out of their liberty and strongly advocated civil liberty for all, and the political liberty to make it possible. He favored social mobility and social and economic institutions which would compel the middle and upper classes to respect the workers.

He detested feudalism and advocated breaking up the large estates and subsidizing rural development. He believed in cash allowances for the parents of large families, and — perhaps most fervently of all — in universal education.

He felt so strongly about education that he even departed from his otherwise invariably courteous and scholarly approach; more than a life span before the introduction of universal primary education in Britain he ridiculed the reactionaries who argued that educating the masses — even letting them learn to read — would make them liable to be led astray by radicals.

The arguments ... against instructing the people appear to me not only illiberal, but to the last degree feeble... (Fogarty, 2, pp.212-3).

Could these be the writings of the Malthus you have come to know?

"God bless you, Malthus. I have long been accustomed to quote you as the very best example I know of a wise and happy man."
— Frances Jeffrey, MP
Founder of the
Edinburgh Review

What Malthus Really Said

The "Malthusian" population theory which most of his opponents seem to believe in goes something like this: because it is a law of nature that there must always be more people than food, it is morally wrong as well as impractical to waste scarce resources trying to improve the life of the masses whose natural lot is poverty, hunger and misery. Therefore, in this jungle of squalor and violence, society must be organized to protect the interests of the rich and powerful.

Even if that were what Malthus had in mind, commentators still would not be justified in subjecting the author to personal abuse. The most effective way of dealing with it — as with any unscientific and immoral theory such as Hitler's ideas on race — would be a cool, factual and systematic exposure of its basis, implications and values.

Malthus' "Total Population Theory" was far more complex than the simple man-food equation for which he is so often given credit — or discredit. He believed that man is subject to natural physical and ecological laws and cannot escape their

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

consequences; that man is gifted with intelligence and foresight so that he can understand the workings of nature, and if he chooses, circumvent possible problems.

All living things have a *capacity* to expand their numbers at an enormous rate, much greater than can find expression in most circumstances. They also have a *tendency* to expand at a rapid rate in most, but not all cases, so as to fill up every ecological niche.

It was these last two points which are the source of the Malthusian myth: the perennial conquest of the feeble arithmetic progression of food production by the rampant geometric progression of population growth. Malthus pointed out that his use of this method was little more than a mathematician's gimmick to illustrate a point and he was quite explicit that the principle of population did not mean that large numbers had to remain at starvation level.

He made clear that the ultimate limitation of human numbers by limits of food production did not necessarily mean a present limitation:

> *A man who ... is locked up in a room may fairly be said to be confined by the walls ... though he may never touch them.*

All living things, he argued, are subject to checks on their growth in numbers, "positive" checks acting on the death rate — such as lack of food or space, violence and disease — and "preventive" checks acting on the birth rate. In the case of the lower animals, the preventive checks are the result of instinct and accident, whereas in the case of man they are intentional.

Subject to natural laws, the happiness and welfare of mankind are produced entirely by the quality of morality and social organization, particularly of government. One of the main social mechanisms in the regulation of population is the demand for labor, with the inevitable lags and tendencies to oscillation, a view barely distinguishable from that of Karl Marx. The main aim of society is to raise living standards and increase happiness by means of a thriving agricultural and industrial system regulated by a just and democratic government.

Possibly, to an anti-Malthusian, the most surprising things about Malthus are his strong opposition to any policy of population control, and secondly, his pro-natalism, for he put forward the view, later taken up by Marx and Engels, that the world was severely underpopulated. On the first count he was not only against any social policy of population control but also opposed individual contraceptive methods of birth control. A deeply religious man, he put his faith in moral restraint and voluntary choice for late marriage.

In this sense one of the most advanced socialist societies in the present world, the People's Republic of China, is neo-Malthusian in both thought and deed (though not yet in word) insofar as it emphasizes both late marriage and moral restraints in regard to extra-marital sex.

"As for hating, Mr. Malthus could hate nobody — which, considering the strength of his feelings ... and the provocations ... he was perpetually receiving, was almost as wonderful a circumstance as that anybody could be found capable of hating him."
— Professor William Empson

Malthus' opposition to compulsion was absolute. In the second edition of the *Essay on the Principle of Population*, he wrote

> *If any person chooses to marry (even) without being able to maintain a family, he ought to have the most perfect liberty to do so.... I am most decidedly of the opinion that any positive law to limit the age of marriage would be both unjust and immoral....*

On the second count, he was in favor of populations growing as fast as possible, consistent with the capacity of the environment and the economic system to support them.

> *The countries which unite great landed resources with a prosperous state of commerce and manufactures, and in which the commercial part of the population never essentially exceeds the agricultural part, are eminently secure from sudden reverses ... and there is no reason to say that they might not go on increasing in riches and population*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

for hundreds, nay almost thousands of years

he wrote, adding for emphasis

> *an increase in population, when it follows in its natural order, is both a great positive good in itself, and absolutely necessary to to a further increase in the annual produce of the land and labor of any country. [There is nothing] ...more desirable than the most rapid increase of population, unaccompanied by vice and misery ... there is not a truer criterion of happiness and innocence of people than the rapidity of their increase.*

In essence, Malthus' view was that there are limits to all physical processes — including population growth, distribution and movement — which no type of social system or morality can circumvent, but that within these parameters *the possibilities for individual welfare and happiness are entirely under social control.*

Malthus' own index of socio-economic development, which reflects the quality of social control, was life-expectancy:

> *A decrease of mortality at all ages is what we ought to chiefly aim at ... as the best criterion of happiness and good government. Instead of the (number) of births ... the usual mode of judging, I have proposed the smallness of the proportion dying under the age of puberty.*

Malthus has been described as "the apostle of private property" and it is true that the thought that at the level of evolution and socio-economic development prevailing in his day, private ownership and enterprise offered the best chance of producing wealth, but it is a far cry from this to the position of black reaction sometimes attributed to him. He thought, in fact, that private ownership of the means of production meant that output would always fall short of potential.

Malthus thought a man's labor his most sacred property, and that it would be a "violation" to interfere with his command over it. He also believed that the existing distribution of property and wealth was unjustified and inefficient. He regarded laws and customs which perpetuated unequal distribution of land, as in feudal Europe, for example, as serious impediments to his two main criteria for a healthy society: a large population and a situation in which "poverty and dependence are ... but little known."

Malthus supported not only a great and continuous increase in wealth and productivity, but also a much more equitable distribution. "It is the diffusion of luxury ... among the mass of the people ... that seems to be the most advantageous ... with regard to national wealth and happiness," he wrote.

John Maynard Keynes wrote toward the end of his long and distinguished career: "If only Malthus, instead of Ricardo, had been the parent stem from which nineteenth century economics proceeded, what a much wiser and richer place the world would be today."

It is a strange paradox that after two centuries many underprivileged individuals and groups — even governments — still publicly abhor the ostensible teachings of Malthus while their countries pursue population policies going far beyond anything he could have tolerated. It was recently affirmed by the United Nations Population Fund that some 80 percent of the population of the Third World lives under governments which are actively pursuing Neo-Malthusian policies of fertility control or of fostering contraception in the knowledge that fewer births will result.

Admittedly the goal is still the same: striking a balance between population growth and social and economic development, but the methods employed and now taken for granted would surely make Malthus turn in his grave. TSC

REFERENCES

Bonar, J. (1885) *Malthus and His Work*, London, Macmillan & Co.

Flew, A.G.N. (ed.) (1970) *Malthus, An Essay on the Principle of Population*, London, Penguin Books.

Fogarty, M.P. *An Essay on the Principle of Population. 2 vols.*

James, P. (ed.) (1966) *The Travel Diaries of T.R. Malthus.* Cambridge University Press.

Keynes, J.M. (1933) *Essays in Biography*, (p.121).

Petric, N. (1977) "Updating Malthusian Population Theory — Out of the Question Today," International Planned Parenthood Federation: *IPPF Europe Regional Information Bulletin*, Vol. 6, No. 1, pp.3-7.

Spengler, J.J. "Malthus' Total Population Theory: A Restatement and Reappraisal. Published in two parts in the *Canadian Journal of Economic and Political Science.* 1st part, II, No.245, (pp.83-110) February 1945; 2nd part, May, 1945, (pp.234-264).

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

The Feast of Malthus

Living within limits

by Garrett Hardin

For a few decades after the publication of Malthus's celebrated essay in 1798, population was much discussed in England; then at about the middle of the 19th century it became overshadowed by more narrowly economic problems. In the 20th century Malthus has, so to speak, been buried every year by his commentators —only to be dug up again the following year. Exactly *why* Malthus is so often repudiated is not clear because the funeral orations typically amount to little more than one brutal word: *Discredited*!

Reviewing many criticisms I have come to the conclusion that a single paragraph in Malthus accounts for much of the rejectors' passion. The offending passage occurs only in the second edition of his essay. Had Malthus retained this paragraph and justified it adequately in subsequent editions I think we would have been spared nearly two hundred years of unproductive brawling. As I see it, Malthus walked right past the heart of the population problem. In presenting my conclusions I shall follow the advice of the physicist George Uhlenbeck (1900-1988), who said: "First tell us what the problem is; then state your conclusions at once. Only thereafter should you go into details..."[1]

The problem is simply this: can the necessity of population control be reconciled with the apparent demands of *individualism*, as that complex concept has developed since John Locke? I conclude that there is a fatal contradiction between these two necessities; and that the survival of civilization will require us to modify significantly the powers we now grant to individual "rights." This social revolution will be painful, but it cannot, I think, be successfully evaded.

Here is the offending paragraph of Malthus:

> *A man who is born into a world already possessed, if he cannot get subsistence from his parents on whom he has a just demand, and if the society do not want his labour, has no claim of right to the smallest portion of food, and, in fact, has no business to be where he is. At nature's mighty feast there is no vacant cover for him. She tells him to be gone, and will quickly execute her own orders, if he does not work upon the compassion of some of her guests. If these guests get up and make room for him, other intruders immediately appear demanding the same favour. The report of a provision for all that come, fills the hall with numerous claimants. The order and harmony of the feast is disturbed, the plenty that before reigned is changed into scarcity; and the happiness of the guests is destroyed by the spectacle of misery and dependence in every part of the hall, and by the clamorous importunity of those, who are justly enraged at not finding the provision which they had been taught to expect. The guests learn too late their error, in counter-acting those strict orders to all intruders, issued by the great mistress of the feast, who, wishing that all guests should have plenty, and knowing she could not provide for unlimited numbers, humanely refused to admit fresh comers when her table was already full.*[2]

Reading this passage thoughtfully one is not surprised to learn that its author became, in James Bonar's phrase, "the best-abused man of the age." The "Feast" led critics to deduce that Malthus (as Bonar put it) "defended small-pox, slavery, and child-murder"[3] (because they kept the population from growing too large) while he "denounced soup-kitchens, early marriage, and parish allowances" (because they encouraged population growth).

The shocking Feast was spread before the public in 1803, in the second edition of the *Essay*. Malthus could hardly have chosen a worse time: a sort of

---

***Garrett Hardin, Ph.D.**, is professor emeritus of human ecology at the University of California, Santa Barbara. His latest book,* Living Within Limits *(Oxford University Press, 1993) received the Phi Beta Kappa Science Award for that year. The Social Contract Press is pleased to be reprinting several of Dr. Hardin's books including the now-completed* Stalking the Wild Taboo *and* Mandatory Motherhood.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"compassion revolution" was then well under way. During the 19th century the English-speaking world made great progress in the humane treatment of animals, in getting rid of slavery, in curtailing child labor, and in (reluctantly) giving a modicum of freedom to women. Bonar has said that "for thirty years it rained refutations of Malthus." Before Malthus died in 1834, four more editions of the *Essay* had been published, the last in 1826; but in none of them did the Feast appear for a second time.

Malthus was hurt by the reactions to his moving metaphor. In 1807, in a letter to a friend in Parliament, the author complained: "To those who know me personally, I feel that I have no occasion to defend my character from the imputation of hardness of heart..."[4] The most passionate of the refutations came from the literary community. One of its leaders, William Hazlett, called the Feast a pleasing allegory, saying of the author:

> *He frolics with his subject in the gaiety of his heart, and his tongue grows wanton in praise of famine. But ... I cannot admit the assertion that "at nature's mighty feast there is no vacant cover for the poor man." There are plenty of vacant covers but that the guests at the head of the table have seized upon all those at the lower end, before the table was full.*[5]

"Throughout this era invective was the preferred weapon of the literati."

Thus was the population argument maneuvered into the area of distribution, an enduring concern of unrelenting liberals for some two centuries.

Throughout this era invective was the preferred weapon of the literati. In 1820, the poet Shelley identified the author of the Essay as "a priest of course, for his doctrines are those of a eunuch and of a tyrant."[6] One could reasonably expect a man as wealthy and as well-connected as Shelley to know that a priest of the English church (which Malthus was) was not sworn to celibacy: in fact, Malthus married in 1804, just a year after publishing the offending paragraph. As for the "eunuch" and "tyrant" in Shelley's diatribe, they simply popped out of the poet's pen — not out of any known facts.

Worse was yet to come. Long after Malthus died, Karl Marx repeated Shelley's canard by asserting that the essayist "had taken the monastic vow of celibacy"; Marx was unaware of Malthus's three children. An error even more difficult to understand was that of the 20th century editor of the *Essay* in the *Everyman* edition, who asserted that Malthus practiced the principles of population control by begetting eleven girls.[7] An obsession with the rigors of scholarship has not characterized Malthus's critics.

A real "fun way" to combat unwelcome conclusions is to invoke an *argumentum ad hominem.* Marx referred to Malthus as "superficial," "a professional plagiarist," "the agent of the landed aristocracy," "a paid advocate", and "the principal enemy of the people."[8] I think that a single overarching view accounts for these and many other invectives put forward by Marxists and liberals during the past century and a half: this is the tightly held denial of limits in the supply of terrestrial resources. Friedrich Engels, Marx's collaborator and financial supporter, asserted baldly that "The productivity of the land can be infinitely increased by the application of capital, labour and science."[9] At about the same time a rather different voice, that of the American Henry George, boldly proclaimed:

> *I assert that in any given state of civilization a greater number of people can be better provided for than a smaller. I assert that the injustice of society, not the niggardliness of nature, is the cause of the want and misery which current theory attributes to overpopulation.*[10]

The underlying attitude of anti-Malthusians is pre-Darwinian: it baldly assumes that the laws of nature which govern all other species of plants and animals were negated for man by the God of *Genesis.* Man is saved by the formula, "X will provide", where "X" may be God, Providence, or Science. As is apparent in the second sentence of George's assertion, this pleasantly acceptable thought is greatly empowered by coupling it with another: Injustice is the primary enemy. It is doubtful if any major reform of the past two hundred years has succeeded without a calculated reference to injustice. (For Darwinians, extinction is more disturbing than simple injustice.)

By Henry George's day, Science was a powerful

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

god, so the author goes on to explain how he thought this new god had obliterated the dangers of overpopulation:

> *I assert that the new mouths which an increasing population calls into existence require no more food than the old ones, while the hands they bring with them can in the natural order of things produce more. I assert that, other things being equal, the greater the population, the greater the comfort which an equitable distribution would give to each individual. I assert that in a state of equality the natural increase of population would constantly tend to make every individual richer instead of poorer.*

"The image of brethren is borrowed from the picture of charity. No one has a million or a billion brethren."

A skeptical Darwinian might well respond, "Ah, now I see why it is that the lemmings jump off the cliff: they can't tolerate the luxury produced by their overpopulation!" Anti-Georgians can sarcastically offer the following advice to every one of the fifty million species of animals and plants: "Overpopulation is GOOD for you!"

Though not considered great, George was an economist of sorts. Sadly, his message is still repeated in our own time by many poorly trained economists. These odd-men-out make a good living by marketing this nonsense. Few things are pleasanter to committed capitalists than being assured that more people are always and forever better. Grow! Grow! Grow!

The belittling of the seriousness of over-population is not restricted to the quack-economists of our time: it is even found among a few of the leaders of the profession. To cite a single instance: Theodore W. Schultz, as late as 1945, boldly asserted that "The nightmare of overpopulation that oppressed Malthus and his contemporaries no longer troubles our minds."[11] Following Henry George, growthmen even cite a principle to explain their anti-Darwinian stance: economies of scale. A factory can turn out a million Rolls-Royces at less per unit cost than a single Ford. Too many economists act as if they think "Bigger is always better."

Scientists know better. At some level of production, the balance shifts to diseconomies of scale. But if you search the indexes of a large sample of elementary economics texts you will find that "economies of scale" are discussed in most of them, while "diseconomies of scale" are seldom mentioned. Darwinians are astonished: in an anti-Darwinian world, elephants could be taller than the World Trade Center, while — well, the reader can easily continue with this fantasy. But, in reality, there is no anti-Darwinian world: wherever there is growth, diseconomies of scale ultimately rule.

Many of the paradigms that guide us come from the Bible. *Genesis* 1:28 says: "Be fruitful and multiply" — without giving any hint of limits or diseconomies of scale. Yet in ancient days scarcity was a possibility that none dared forget. In our time most people accept as gospel society's ability to cure a shortage by increasing the supply. Not so, said the Preacher of *Ecclesiastes* (5:11): "When goods increase, they are increased that eat them." What was true in the 2nd century B.C. is still true: an increase in foodstuffs makes overpopulation worse, not better. We recognize this truth in herds of cattle grazing in nature; but we act as if our own species lives by some other law of nature.

In the 3rd century A.D. the church leader Tertullian firmly grasped this nettle of reality. He said: "The scourges of pestilence, famine, wars, and earthquakes have come to be regarded as a blessing to overcrowded nations, since they serve to prune away the luxuriant growth of the human race."[12] The figure of speech "prune away" comes naturally to an agricultural people, who cultivate fruit trees the growth of which needs to be controlled to achieve the best production. More generally it may be said that, to survive and persist, every species needs its "enemies" to keep its numbers down. This truth was enlarged upon by Joseph Townsend, twelve years in advance of Malthus' essay.[13] Traditionally, we regard a predator as the enemy of a single prey animal; but the predators of a population are not, in the final analysis, enemies of the species. Without some sort of external control a species can eat itself out of house and home.[14]

One might expect this truth to be generally recognized among laymen, but the zoologist W. T.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Edmonson tells of a sociologist friend who found difficulty in believing that the multiplication of *Daphnia* (water-fleas) is inhibited by lack of food.[15] Familiar with the correlation of human poverty with large family size in the "Third World," the sociologist expected starved water-fleas to be more fertile than well-fed ones. He did not realize that the behavior of human populations is anomalous and requires special explanation. He regarded the reproductive behavior of *Daphnia* as a surprising exception to what he thought was a general rule of biology. Small wonder that Malthusianism is so often rejected!

"Too many economists act as if they think 'bigger is always better.' Scientists know better."

Many implicit assumptions are involved in Malthus's Feast. Among these are the following:

a. The system of private property is ethically right, from which it follows that—

b. Need does not create an unqualified right; and—

c. Justice does not demand an equal distribution of goods; also—

d. Though society may tolerate a beggar's successfully working "upon the compassion of some of [nature's] guests. [and] ... The order and harmony of the feast is disturbed, the plenty that before reigned is changed into scarcity; and happiness of the guests that before reigned is changed into scarcity..." And finally—

e. Malthus implicitly makes a significant distinction between charity and philanthropy.

"Charity," derived from the Latin *caritas*, love, has a strong implication of a one-on-one relationship (as in the love of a wife for a man). "Philanthropy," by contrast, asserts a love (*phil-*) focused on mankind (*anthropos*), which is a very plural concept. Most people feel that the one-to-many love in philanthropy cannot be as intense as the one-to-one relationship in charity. We note that the promoters of philanthropic enterprises tend to muddle the distinction by referring to their work as "charity." A philanthropic act is aimed at bettering a large population — perhaps the whole species — sometimes even at the expense of some individuals. The justification of philanthropy is found in the totality of its consequences (when compared with the consequences of the known alternative actions).

Adam Smith, before he changed his principal interest from ethics to economics, treated what we would now call "charity" under the rubric of "beneficence." He wrote: "Beneficence — is the ornament which embellishes, not the foundation which supports the building [of ethics]."[16] In other words, charity is, as it were, a retail form of ethical behavior while philanthropy, focusing on larger populations, is a kind of wholesale ethics. Smith illustrates this distinction at some length (of which the following passage is a much shortened version):

> *Let us suppose that the great empire of China, with all its myriads of inhabitants, was suddenly swallowed up by an earthquake, and let us consider how a man of humanity would be affected upon receiving intelligence of this dreadful calamity ... provided he never saw [the victims], he will snore with the most profound security over the ruin of a hundred millions of his brethren ... would a man of humanity be willing to sacrifice the lives of a hundred millions of his brethren, provided he had never seen them? Human nature startles with horror at the thought.*[17]

The image of *brethren* is borrowed from the picture of charity. No one has a million or a billion genuine brethren. To use this term as Smith did is to try to introduce a family attitude into our reactions to an unimaginable multitude of non-relatives. It won't work.

By his ambivalence Malthus spoiled the metaphorical utility of the "feast" for seven generations; the problem was finally revived with a different metaphor, the image of a "lifeboat."[18] The same ethical problem is treated in the area of military medicine under the title of "triage."[19]

The "conservation of a favorable self-image" seems to be a rule of psychology. A self-image of great kindliness is devoutly to be desired, so the terms "feast," "lifeboat," and "triage" have been given

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

the cold shoulder, despite the fact that all three offer us recipes for the conservation of goods in a limited physical world subject to limitless demands.

This brings us back to the wisdom of Koheleth, the Preacher, who asserted that it was general knowledge in his time (3rd century, B.C.) that: "When goods increase those who eat of them increase."[20] After another two thousand years the inescapable implication of the Preacher's wisdom was given: "We can't cure a shortage by increasing the supply." Why can't we? Because every "shortage" of supply is equally a "longage" of demand.[21]

Since we inhabit a limited world — (no other is practically available to our species) — the standard commercial competition favors individuals who refuse to reduce the longage of their demands. Unquestioning faith in the free enterprise system favors those who refuse to acknowledge essential shortages. As a result the dominant kind of competition favors the long-term suicide of the demanders. Ecologically oriented citizens (the intellectual descendants of the common man in Tertullian's day) are (for the present at least) at a competitive disadvantage.

"[With] complete freedom in reproduction, conscientious people will be eliminated..."

Can this sociological malfunction be corrected? Initially, Malthus saw no escape from the ultimate tragedy of overpopulation; but Godwin and Condorcet pointed out that births could be controlled artificially. This proposal shocked Malthus, who suggested — not very enthusiastically — that reproduction could be minimized by extensively resorting to voluntary abstinence in marriage. This path clearly requires a super-potent conscience.

Following the Malthusian path, an individual may have to restrict his (her) fertility in the interests of the community as a whole. Charitable impulses — concern for the feelings of the partner (not to mention the nation) —must yield to a philanthropic desire to make life better for psychologically distant "others" — one's own posterity as well as strangers on distant shores. To put the matter bluntly, real population control requires that the individualistic rights asserted by the descendants of Locke and Smith must be significantly curtailed.

Malthus did not see this clearly; and in our day the promoters of "Planned Parenthood" have perpetuated the confusion. Their literature implies that birth control will inevitably produce population control, though their official goal is only to make it possible for each woman to have the number of children she wants, when she wants them.

Though birth control (read, "planned parenthood") may help in preparing a psychologically favorable environment for stronger measures, the intellectual descendants of Locke must insist that: birth control is NOT population control.

A childishly simple resort to numbers validates this conclusion. In present-day North American culture, 2.1 children per couple would produce a stable population size — but how can we ask any woman to produce exactly 2.1 babies? More to the point, there is no biological mechanism to ensure that individual women will produce the number of children needed to achieve population stability in the entire group.

Conscience, like other individual characteristics, varies. One woman may be satisfied with one child, while another craves four. Intended or not, with no community control of reproduction, a competition in breeding will develop. In all other species of animals there is a genetic component to fertility; but anyone who suggests that genes also influence fertility in the human animal kindles the ire of genophobes — individuals who are intellectually repelled by the idea of genetic differences in humans. Fortunately, in the dispute over population control, it is not necessary to raise the genetic issue. It is enough to assume that there may be a sort of cultural heredity — that the advice and examples set by parents have some influence on the behavior of their children.[22] (Understandably, of course, parents usually crave more than merely "some".) With *either* genetic heredity *or* cultural heredity, a variant of Gresham's Law[23] is set in play: since high fertility tends to diminish the monetary wealth of a family, then (focusing only on economics) we must say that, over time, *with uninhibited fertility, low living standards drive out high.*[24]

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

In a welfare-free social order this might not matter, because the extra childhood mortality associated with too numerous a family might correct for the parents' error; but with generous social welfare the children of an unwisely fertile couple may be saved to breed in the next generation. One of the major consequences of this fact has been succinctly stated by the economist Milton Friedman: "You can't have free immigration and a welfare state."[25] To invite the overly fertile into a prosperous country to share in welfare riches is to pursue a policy of national suicide. (And, if generalized for the entire world, a policy of species suicide.)

Individualism rightly enjoys such high prestige that the reader may resent any suggestion that individual desires must sometimes be curbed for the good of the community. But think of bank-robbing. If the individual could get away with it he might well adopt this occupation; but if everyone robs, everyone pays for the robbing — and the individual is thwarted after all. Consciences vary. In a community in which there is complete freedom in reproduction, conscientious people will be eliminated: this is a particular example of the "competitive exclusion principle."[26]

When predators, disease and other population controls external to a species become much enfeebled, individual freedom must be infringed upon. The community must then take over the function formerly performed by external forces. Community interest takes precedence over individual desires. Coercion is essential, but in a democracy it should be only a coercion by laws which are agreed to by the majority. The necessary formulaic statement of democratic individualism is this: mutual coercion, mutually agreed upon.[27]

The introduction of coercion into a discussion inevitably arouses existing antipathies to the word. The mind of the auditor is immediately flooded with images of violently coercive measures. The recollection of the horrors perpetrated by Hitler and Stalin freeze the mind into non-productive channels. We forget that a sweet "Pretty please!" from a dimpled girl can also be an effective coercion. More generally (as has long been recognized), coercion occurs in two different forms: the carrot and the stick. The possibility of achieving the necessary population control in a growing population afflicted by diseconomies of scale depends on our ingenuity in discovering effective carrots.

Society has already had considerable experience in devising acceptable (though not entirely pleasant) controls over access to privileges whenever demand outpaces supply. Is the demand for unspoiled wilderness too great for the population size? Effective demand can be reduced by converting community property into salable private property, which is then sold by auction. Or temporary permits for entrance can be sold at sufficiently high prices. Or "first come, first served" can be declared the policy: this will favor people who are richer in time (for queuing up) over those who are merely rich in money.

Many other "gimmicks" can be used for allocating resources in a world overwhelmed by demand. To find the gimmicks that work well enough for population control we must first be convinced that the need exists. In the immediate future we must undo a great deal of mal-education already entrenched in our society by media-masters who appear to be under the direction of the minority of economists who do not quite understood the potency of exponential growth and the ultimate inescapability of diseconomies of scale. The task ahead is monumentally daunting.

As we have seen in discussing Malthus's Feast, the words "charity" and "philanthropy" can be usefully distinguished. The first refers to an individualistic goal; the second focuses on a community, sometimes on the entire species. To save humanity from eating itself to extinction we must abandon the dominant religion of the past three centuries — Lockean individualism — and dedicate ourselves to a new — and also very old — commitment to community. This change in overall ideals will require many changes in particulars. As concerns the problems here discussed we must recognize that—

One: Birth control is an individualistic goal, achievable by each individual (or couple) alone.

Two: Population control is a philanthropic goal, not achievable by charitable actions alone.

A social revolution is called for, and the fact that it may reasonably be interpreted as a counter-revolution inspired by earlier ideals does not make the achievement of it any easier. It is difficult for potent activators to foresee the details of any revolution-to-come. What we need are experiments

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

— many experiments. Dreams of "One World" are not acceptable substitutes for actual experiments. Since most social experiments fail we need many experiments. This means that our species must continue to be subdivided into many nations. The overall attitude should be one of encouraging many locally designed experiments, coupled with a universal and almost religious observance of a strict policy of "Keep your (national) nose out of my (national) business!" That means we must discourage loose talk of "universal human rights,"[28] for we can be sure that every partial success in the local control of a population will be achieved by adopting measures that are condemned by some nations somewhere.

We can learn from each others' mistakes. There is no better way. TSC

[Dr. Hardin's e-mail address is: hardin@silcom.com.]

NOTES

[1] Abraham Pais: *A Tale of Two Continents.* Princeton, NJ: Princeton University Press, 1997. (p. 36)

[2] T. R. Malthus: *An Essay on the Principle of Population,* 2nd ed. London: J. Johnson, 1803. (Book IV, Chap. VI, p. 531.)

[3] James Bonar: *Malthus and His Work.* London: Macmillan, 1885. (pp. 1-2.)

[4] Thomas Robert Malthus: *A Letter to Samuel Whitbread, Esq., M.P.,* 2nd ed. London: J. Johnson. (Reprint, New York: Kelley, 1970.)

[5] William Hazlett: *A Reply to the Essay on Population.* London: Longman, et al, 1807. (Reprint, New York: Kelley, 1967.)

[6] Percy B. Shelley: "A philosophical view of reform." In *The Complete Works of Percy Bysshe Shelley.* London: Gordian, 1829. (vol. 7, p. 32)

[7] William Petersen: *Malthus.* Cambridge, MA: Harvard University Press, 1979. (p. 22)

[8] J. Dupaquier et al, eds.: *Malthus Past and Present.* New York: Academic Press, 1983. (p. 258)

[9] John Passmore: *Man's Responsibility for Nature.* New York: Scribner's, 1974. (p. 150)

[10] Henry George: *Progress and Poverty,* 1879. Reprint, New York: Schalkenberg, 1962. (pp. 141-142)

[11] Theodore W. Schultze: *Food For the World.* Chicago: University of Chicago Press, 1945. (p. 310)

[12] From De Anima.

[13] Joseph Townsend: *A Dissertation on the Poor Laws, by a Well-Wisher to Mankind.* London: 1886. Reprint, Berkeley: University of California Press, 1971.

[14] This is one of the problems associated with the origin of life. See Garrett Hardin: "Darwin and the heterotroph hypothesis," *Scientific Monthly,* 70(3):178-179. 1950.

[15] W. T. Edmondson: *The Uses of Ecology: Lake Washington and Beyond.* Seattle: University of Washington Press, 1991. (p. 302)

[16] Adam Smith: *The Theory of Moral Sentiments,* 1759. (reprint, Indianapolis: Liberty Classics, 1969.) (p. 167)

[17] Ibid, p. 233.

[18] Garrett Hardin: "Living on a lifeboat." *BioScience,* 24 (10):561-568. 1974. (As an indication of the ambivalence of our times it should be noted that this paper was first rejected by *The American Scientist.* The known reprintings of it in anthologies, etc., amount to 15.)

[19] Garrett Hardin: *Promethean Ethics: Living with Death, Competition, and Triage.* Seattle: University of Washington Press, 1980. (pp. 56-71)

[20] *Ecclesiastes* 5:11. I have used the wording of the "Goodspeed Bible."

[21] Garrett Hardin: *Living Within Limits.* New York: Oxford University Press, 1993. (pp. 309-310)

[22] Mark Sagoff: "The philosopher as teacher." *Metaphilosophy* 11:307-325. (p. 315) This is a splendid display of genophobia. The author is also under the impression that non-human animals instinctively act so as to achieve population control, thus ignoring the insight of Tertullian some 17 centuries earlier.

[23] Garrett Hardin: *The Ostrich Factor: Myth & Myopia Meet Myopia.* (Chap. 17; in press)

[24] Garrett Hardin: "The cybernetics of competition" (1963). Reprinted in Hardin: *Stalking the Wild Taboo,* 3rd ed. Petoskey, MI: The Social Contract Press. (pp. 195-197)

[25] Milton Friedman, news item: *National Review,* 31 December 1997. (p. 4)

[26] Garrett Hardin: *Stalking the Wild Taboo,* 3rd edition. Petoskey, MI: The Social Contract Press, 1997. (pp. 195-197)

[27] Garrett Hardin: "The tragedy of the commons." *Science,* 162:1243-1248. 1968.

[28] Garrett Hardin: *Living Within Limits.* (pp. 277-278).

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Back to Malthus

200-year-old scenario may return to haunt us

by Werner Fornos

Most prophets have been consigned to the trash bin at some point in human history, only to be retrieved, resurrected, and sometimes even beatified. Prophets and visionaries, by definition, cannot be judged during their lifetimes. In the fields of economics and other social sciences, no one has been more discredited than the Reverend Thomas Robert Malthus, who has been more recognized in derision than in serious contemplation.

As the world continues to grow exponentially as the English parson had warned us, the relevance of his thinking becomes as clear as the summer sky. Two hundred years after he first wrote his "anonymous" *Essay on the Principle of Population*, few miracles, it appears, can save the world from careless growth. A careful study of the Rev. Malthus' theories, principles, likely outcomes and possible solutions makes one thing clear: for all their mistiming and misconceptions, Malthus' fears are at our world's threshold again. Now, more than at any other time in history, we must heed his warnings, notwithstanding the dismissive claims of the so-called optimists.

Credible and incontrovertible evidence is presented almost every day that points to a growing imbalance between population growth and the world's resources. There is still hope, and possible room, for yet another technological miracle, but any such breakthrough cannot wipe out fears of a food crisis forever: it can only postpone it for a little longer. There is a limit to available croplands in the world, and statistics indicate a gradual fall in per capita cropland use and food grain output already.

We can no longer rest on our hope for technology to carry us through another crisis. Alongside a search for more efficient ways to feed our billions we also must work to reduce the number of mouths to feed, as Malthus himself recommended. Population stabilization efforts can no longer be ignored as unnecessary preparations or unwarranted panic mongering. A reassessment of Malthus will give us that most essential inspiration to make the world more livable.

***Werner Fornos** is president of the Population Institute, a Washington-based nonprofit public interest group. He is a frequent speaker and writer on "rational and humane solutions to the population problem." Readers may contact Mr.Fornos by e-mail at Popline@Primanet.com.*

Population Concerns in History

Even though the Reverend Malthus made his startling prediction 200 years ago, he was not exactly the first person in history to express concern over excessive population growth. Several ancient epics as well as earliest history texts have references to overpopulation and its adverse effects.

Joel E. Cohen, the respected population scientist, in his introduction to the book, *How Many People Can the Earth Support?* lists references to overpopulation in early Babylonian tablets from circa 1600 B.C. and from Homeric epics. In the Babylonian history of humankind, the gods, alarmed and disturbed by the rapid multiplication of people, ordered: "Let there be a pestilence (upon mankind)." In the Homeric epic of *Cypria* (written 776-580 B.C.), Zeus caused the Ilian war to relieve the earth of the growing pressure of mankind.[1]

In 1758, eight years before the Rev. Malthus was born and 40 years before he wrote his *Essay*, the rector of a Danish parish, the Reverend Otto Diederich Lutken, published an article in the *Danish-Norwegian Economic Magazine* entitled "An enquiry into the proposition that the number of people is the happiness of the realm, or the greater the number of subjects, the more flourishing the state." The article began:

> *Since the circumference of the globe is given and does not expand with the increased number of its inhabitants, and as travel to other planets thought to be inhabitable has not yet been invented; since the earth's fertility cannot be extended beyond a given point, and since human nature will presumably*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

remain unchanged, so that a given number will hereafter require the same quantity of the fruits of the earth for their support now, and as their rations cannot be arbitrarily reduced, it follows that the proposition "that the world's inhabitants will be happier, the greater the number" cannot be maintained, for as soon as the number exceeds that which our planet with all its wealth of land and water can support, they must needs starve one another out, not to mention other necessarily attendant inconveniences, to wit, a lack of the other comforts of life, wool, flax, timber, fuel, and so on. But the wise Creator who commanded men in the beginning to be fruitful and multiply, did not intend, since He set limits to their habitants and sustenance, that multiplication should continue without limit.[2]

"In the 20th century [contrary to Malthus' projections] falling fertility in Europe threatened underpopulation."

Two decades before Malthus published his first version of his *Essay*, Adam Smith, in his monumental work, *An Inquiry into the Nature and Causes of the Wealth of Nations*, studied the principles of population in relation to the working of the labor market:

A half-starved (Scottish) Highland woman frequently bears more than twenty children, while a pampered fine lady is often incapable of bearing any, and is generally exhausted by two or three. Barrenness, so frequent among women of fashion, is very rare among those of inferior station.[3]

In another comment that runs close to the Malthusian theory, Smith said:

Every species of animal naturally multiplies in proportion to the means of their subsistence, and no species can ever multiply beyond it. But in civilised society it is only among the inferior ranks of people that the scantiness of subsistence can set limits to the further multiplication of the human species; and it can do so in no other way than by destroying a great part of the children which their fruitful marriages produce.[4]

These simple but profound extrapolations of a universal truth bear close resemblance to the Malthusian theory, yet no one has heard of the Rev. Lutken being hauled over coals for his opinion. Then what made Malthus the singular target of all Utopians?

Anatomy of a Prediction

What makes the Malthusian theory harsh are both the sweeping conclusion and the rather bleak scenario it projects for the late 18th and the early 19th century England — so much so that the word Malthusian has become synonymous with "pessimistic."

The core of his theory was that population grows in geometrical proportions — multiplying at the rates of 1, 2, 4, 8, 16, etc., and doubling every 25 years — while food production can grow only in arithmetic progressions — 1, 2, 3, 4, 5, etc. — and therefore at some point in the future ("in a thousand years") population growth will overwhelm food production. When such a time arrives, the theory concludes, misery and vice will act as checks on population growth, and again bring about a balance between the two.

Malthus based his theory on two postulata, assumptions that are as valid today as they were 200 years ago:

First, that food is necessary for the existence of man. Secondly, that the passion between the sexes is necessary and will remain nearly in its present state.[5]

The weight of the Utopians' criticism was directed at his conjectured rates of growth of population (geometrical) and food production (arithmetical). Malthus extrapolated his theory from real-life experiences of the time, and in 18th century England his projections for food production seemed even generous. He had no way of foreseeing that science would revolutionize agriculture with steam engine, biochemistry and plant genetics.

So, mechanization and the green revolution boosted global food production, especially in the 20th century, and fortunately the world did not see the kind of widespread famine and starvation Malthus expected. Falling fertility in Europe, in fact, threatened to prove contrary to Malthusian projections — the problem of underpopulation. But

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

the specter of the "Malthusian trap" was never completely removed.

Less than a decade after Malthus's death in 1834, neighboring Ireland faced one of the world's worst famines. Ireland in the 1840s was overpopulated, and depended heavily on its potato harvests. Because of widespread poverty, the potato was the only available cheap, staple food for the Irish. But between 1845 and 1847, Ireland's potato crop failed because of a plant disease, a fungus, resulting in widespread starvation and deaths. As many as 750,000 Irish people are believed to have died in the famine, and 800,000 emigrated to the United States — emigration is another of Malthusian checks on a population explosion.

Similarly, Bengal, then part of British India, and China suffered a series of famines and epidemics over the next 100 years, resulting in millions of deaths. About 9 million Chinese are believed to have died in famines between 1877 and 1879. In 1902, another famine in China resulted in about a million deaths. About 800,000 people died in the famine of 1837 in India.[6] Is it merely a coincidence that China and India, the two countries that have historically suffered the most from famines, also happen to be the two most populous countries in the world? Or were these instances of pestilence, additional Malthusian check on population, at work?

The Irish, Chinese and Bengal famines have often been attributed to mistaken government policies and social structures and it has been claimed that they have nothing to do with the Malthusian theory. Malthus was influenced by the socio-economic theories of Adam Smith and others, and in fact, his *Essay* was in response to several such theories. His concepts of population growth versus available "room and nourishment" on Earth, and his subscription to Smith's principles on the demand and supply of labor — all these point to the fact that his theory was not divorced from the socio-economic aspects of population growth.[7]

Of Time and Scale

Malthus began his career as a demographer with deep pessimism about "the future improvement of society" when he first wrote his *Essay* in 1798. In subsequent editions, he progressed to cautious optimism. In that sense, he even made allowances for scientific advances, and yet-unknown "checks" on population. Unlike the so-called neo-Malthusians of the 20th century, Malthus did not set a date for the Apocalypse to befall the Earth. In a major disservice to his campaign, his followers in this century trivialized his theories by wagering on the advent of Doomsday. While the 18th century English parson, even if he had no way seeing the future advances, conceded the infinite possibilities of the vast realm of science and social behavior, his modern-day followers have been extremely short-sighted in their projections and warning.

"Unlike the so-called neo-Malthusians of the 20th century, Malthus did not set a date for the Apocalypse."

Paul Ehrlich, the respected Stanford University biologist, who will be remembered as one of the pioneers in spreading awareness of population-resources balance, was also among the first to assume the role of a neo-Nostradamus. His various books, beginning in the 1960s' with *The Population Bomb*, succeeded in bringing population concerns to the forefront of international debates. But his credibility suffered with his prediction of widespread famines in ten years. Such short-term predictions of doom also discredited other Ehrlich contemporaries, including William and Paul Paddock (father and son) who wrote a book entitled *Famine – 1975...* in 1967!

Paul Ehrlich almost forfeited his position as a leading environmentalist when he lost a wager on metal prices with Julian Simon, an advocate of the "more the merrier" philosophy.

It can be argued that just as the Industrial Revolution proved Malthus wrong, the Green Revolution in Mexico and India in the 1970s upset Ehrlich's calculations. But contemporary prophets simply must refrain from predicting that Doomsday is nigh. Such exercises only result in robbing the environmental concerns of all their seriousness.

That the absolute predictions of Ehrlich and the Paddocks did not come true in the 1970s doesn't mean the fears of Malthus are gone forever. Today, more than ever in the past, the Malthusian trap is

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

staring us straight in the face. Malthus reached his famous ratio on population growth and food production on the basis of the newly independent colonies of North America, where population was doubling every 25 years, but food production was only adding one more proportion over the base year. The world's population today will not double in 25 years — because as the population base grows larger it will take longer for the population to double — but the growth rate is as alarming as Malthus feared.

"...the main Malthusian checks to population growth are also in evidence in Africa where millions are killed in wars, carnage, and in famines caused by floods and drought."

It took the world population a hundred years to move from 1 billion in 1830 to 2 billion in 1930, but only 30 years to reach the third billion in 1960; 15 years to reach the fourth billion in 1975, and 12 years to reach 5 billion in 1987. It is expected to reach 6 billion sometime in 1999. Thus, even at this huge size, world population is set to double in less than 40 years — from 3 billion in 1960 to 6 billion in 1999.[8]

There are at least 74 countries, 40 of them in Africa, whose populations are doubling within 30 years or less.[9] Not coincidentally, these countries also happen to be the ones struggling the most to feed their millions.[10] Every year more than 80 million people are added to the world's population. About 98 percent of the annual increase occurs in poor developing countries in Asia and Africa whose capacity to meet the basic needs of their peoples is far from adequate.[11]

As I pointed out in my recent testimony before the Foreign Operations Subcommittee of the U.S. House of Representatives Committee on Appropriations, the enormous momentum in population growth set off by the entry of nearly three billion people — a number equal to the entire population of the world as recently as 1960 — into their reproductive years in the next generation will have the largest impact on future population growth.[12]

Eighty percent of the world lives in less developed countries. The share of the more developed world is expected to fall from the present 20 percent to 16 percent in 2020. Europe and, to a lesser extent, North America, may have turned into Adam Smith's "pampered fine lady" and slowed down population growth in economic prosperity, but Africa has become a shocking laboratory to prove the Malthusian theory.

The continent, now home to 750 million people, has been growing at the staggering annual rate of 2.6 percent. Most African countries have total fertility rates of six children or more per woman. True to the other end of the Malthusian equation, Africa is also the least self-sufficient in food production. The continent is largely covered with deserts and has little arable land. Most African countries, beaten at the marketplace, look up to food aid from rich Western countries.

Misery and pestilence, the main Malthusian checks to population growth, are also in evidence in Africa where millions are killed in wars, carnage, and in famines caused by floods and drought. Thousands of African lives are also claimed every year by diseases such as AIDS, the worst pestilence of the modern age, and by Ebola virus and Dengue fever.[13]

Feeding the Millions

Driven to Utopian optimism by the phenomenal success of science in multiplying global food production, critics have been quick to trash Malthusian predictions as shortsighted scare mongering. Ignorant as he was of the scientific miracle in store for the world, Malthus allowed room for such a scenario in his limited assessment:

> *No limits whatever are placed to the productions of the earth; they may increase for ever and be greater than any assignable quantity; yet still the power of population being a power of a superior order, the increase of the human species can only be kept commensurate to the increase of the means of subsistence by the constant operation of the strong law of necessity acting as a check upon the greater power.*[14]

So far, the world's food production has managed to keep pace with population growth and

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

may do so for some years to come. There are signs everywhere, however, that the "fruits of the earth" cannot be taken to be infinite. We of the 20th-21st centuries have already seen the near-saturation of the technological miracle that helped boost food production. While another technological revolution to improve the world's resource reserves may not yet be ruled out, to place all hopes in that invisible cornucopia would be foolhardy.

The Green Revolution of the 1960s and 1970s, driven by the development of better varieties of food grains and more efficient use of croplands, gave rise to euphoric complacency. However, according to agricultural scientists and policy experts, the growth has apparently hit a plateau. Lester R. Brown of the Worldwatch Institute warns us that 200 years after Malthus wrote his *Essay*, "the race between food and people is still a matter of concern in many national capitals."[15]

"...humankind's dogged effort to extend its turf invariably comes into conflicts with Nature and other species."

From 1950 to 1990, the world's grain farmers raised the productivity of their land by an unprecedented 2.1 per cent a year, but since 1990 the rise has slowed markedly. Rice production, which grew at the rate of 2.1 percent annually between 1960 and 1990, has dropped to 1 percent since 1990; wheat yields dropped from 2.6 percent annual growth to 1 percent, and corn productivity fell from 2.6 percent to 1.7 percent. During the same period, world population has been growing at the annual rate of 1.5 percent.[16] Could it be that the Malthusian specter is revisiting us, revalidating fears of population growth over-whelming food production?

"The slower rise in world grainland productivity during the 1990s may mark the transition from a half-century dominated by food surpluses to a future that will be dominated by food scarcity," Brown warns.[17]

A 70-day supply of grain in carryover stocks is considered desirable for a minimum level of food security. However, since 1996, it has been hovering around a 50- to 55-day supply.

Even as the world's farmers race to feed the billions, large stretches of farmland are lost to soil erosion, salinization and other forms of degradation. The Global Land Assessment of Soil Degradation (Glasod) estimates that of the nearly 8 billion acres which are under pasture, 21 percent are degraded, while of the 3.7 billion acres in cropland, 38 percent are degraded to various degrees. The degradation of cropland is most extensive in Africa, affecting 65 percent of the cropland area, compared with 51 percent in Latin America and 38 percent in Asia.[18]

Farming in most of the developed world depends heavily on irrigation, but water has become one of the scarcest commodities of the modern world. According to recent reports, 1.5 billion people — nearly one-quarter of the world population — lack an adequate supply of drinking water. As many as 39 countries are expected to suffer severe water deficiency by 2050. Not surprisingly, 35 of these countries are set to double their populations by that year.[19]

The growing urbanization of the world also results in the diversion of agricultural land into such uses as housing, industrial and recreational sites. The World Resources Institute estimates that since World War II, nearly 3 billion acres — equivalent to the combined area of China and India — have been impaired as a consequence of human activity.[20]

With the shrinking of farmland, people resort to extreme, environmentally dangerous steps to sustain farming. Thousands of square miles of forests have been burnt in desperate attempts to gain croplands in several parts of the world. More than 19,000 square miles of Amazon rain forests have been burning for over two months, destroying several animal and plant species. Fires set off by firewood-seekers in Indonesia earlier this year caused severe air pollution throughout Southeast Asia. According to estimates, year after year the world is losing some 28 million acres of forest, more than two-thirds of which is converted to unsustainable agricultural purposes.[21]

"Half of the forests that once covered the earth are gone, and deforestation has been accelerating in the last 30 years," says a recent Worldwatch report. "Each year, at least another 39 million acres of natural forest are razed — an area the size of

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Washington State," the report says.[22]

As the demand for food presses against the available cropland, humankind's dogged effort to extend its turf invariably comes into conflicts with Nature and other species. Pushed to the limits of croplands, the human species turns to the world's oceans to supplement nourishment. As giant trawlers scrape the ocean floor to increase fish output, the marine ecosystem is gradually and irredeemably destroyed. Most of the world's fish species are either over-exploited or exploited near their replacement levels.

According to the World Conservation Union's first comprehensive Red List, published recently, 12.5 percent of the world's 270,000 known species of plants are found at risk of extinction. In the United States, 29 percent of the 16,108 plant species are on the imperiled list. Many of these plants are essential in producing life-saving drugs. For example, 75 percent of the yew family, which produces the anti-cancer drug taxol, is threatened with extinction, according to the Union.[23]

As the world struggles to feed, clothe and shelter the growing millions, the delicate balance among animals, plants, natural resources and the atmosphere is severely disturbed. A now-familiar strain of the call for sustainable development in consonance with the earth's carrying capacity can be read in Malthus's revised *Essay,* where he suggests efforts to balance population with "provisions" of sustenance.

Checks to Population Growth — Malthusian and Modern

Explaining the delicate balance between population and resources and its consequences, Malthus wrote:

> *Through the animal and vegetable kingdoms, nature has scattered the seeds of life abroad with the most profuse and liberal hand. She has been comparatively sparing in the room and the nourishment necessary to rear them. The germs of existence contained in this spot of earth, with ample food and ample room to expand in, would fill millions of worlds in the course of a few thousand years. Necessity, that imperious all pervading law of nature, restrains them within the prescribed bounds. The race of plants and the race of animals shrink under this great restrictive law. And the race of man cannot, by any efforts of reason, escape from it. Among plants and animals its effects are waste of seed, sickness, and premature death. Among mankind, misery and vice. The former, misery, is an absolutely necessary consequence of it. Vice is a highly probable consequence, and we therefore see it abundantly prevail, but it ought not, perhaps, to be called an absolutely necessary consequence.*[24]

Malthus suggests an oscillatory effect between population growth and the welfare level of society: population grows beyond sustenance; famine, diseases and high mortality, especially among children, ensue, thus reducing population growth, even as surviving members of society toil harder to produce more food to meet the demand. The suggestion that disease and starvation will check population explosion may sound out-of tune with the medical advancements of this age, but starvation and diseases continue to haunt millions of people all over the world.

"As the world struggles to feed, clothe and shelter the growing millions, the delicate balance between animals, plants, and natural resources and the atmosphere is severely disturbed."

More than 20 million adults worldwide are infected with AIDS, which has led to an increase in mortality in Africa — to more than one-and-a-half times the world average — and brought down life expectancy to 50 years or less in several African countries. Infant and maternal mortality rates continue to be high in several parts of the world.[25]

Recent reports have also indicated a return of infectious and parasitic diseases such as malaria, tuberculosis, cholera, dengue fever and Ebola. More than 17 million people have died from these diseases since 1995, accounting for more than one-fourth of all deaths. About 97 percent of these deaths occur in low-income countries that also have high fertility rates.[26]

On a more humane level, Malthus also prescribes other checks on population which are

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

within the control of the people — the very ideas promoted by the modern-day demographers and sociologists:

> *...a foresight of the difficulties attending the rearing of family acts as a preventive check and the actual distresses of some of the lower classes, by which they are disabled from giving proper food and attention to their children, acts as a positive check to the natural increase of population.*[27]

In the revised edition of the *Essay*, Malthus was less pessimistic about the future happiness of society and added one more possible check to population: delayed marriage, which he termed "moral restraint."

> *It is clearly the duty of each individual not to marry till he has a prospect of supporting his children; but it is at the same time to be wished that he should retain undiminished his desire of marriage, in order that he may exert himself to realize this prospect, and be stimulated to make provision for the support of greater numbers.*[28]

Of course, modern contraception was inconceivable in Malthus's time; nor could one expect the parson to recommend abortion. So within the constraints of the time the best solution he could find was delayed marriage and childbearing, which continue to be among the prime strategies of population stabilization advocates today. Several international studies have revealed that delayed marriage has helped many countries slow down their population growths.

In an apparent rejoinder to Adam Smith's theory on labor, Malthus wrote, "...we must explain to (the poor) the true nature of their situation and show them that the withholding of the supplies of labour is the only possible way of really raising its price, and that they themselves, being the possessors of this commodity, have alone the power to do this."[29] The modern Western conglomerates' race to cash in on the cheap labor of China and other Third World countries cannot be better explained.

In an unintended forerunner to the 1994 Cairo Programme of Action on Population and Development, Malthus wrote: "...it is not the duty of man simply to propagate his species, but to propagate virtue and happiness; ...If he has not a tolerably fair prospect of doing this, he is by no means called upon to leave descendants."[30]

As Dr. Nafis Sadik, executive director of the United Nations Population Fund (UNFPA), asserted, the Cairo Programme of Action contained "highly specific goals and recommendations in the mutually reinforcing area of infant mortality, education and reproductive health and family planning, but its effects will be far wider-ranging than that. The Programme of Action has the potential to change the world."[30]

More is not the Merrier

Malthus's detractors, bent on proving his theory wrong, claim that the earth's resources, even at present levels, can sustain 11 billion or 15 billion people — more than double the current population. They claim that the recoverable stocks of various metals and minerals in the earth can sustain us for thousands of years to come. But the signs of the times show more strain on the resources than comfort.

"...it is not the duty of man simply to propagate his species, but to propagate virtue and happiness..."
— Thomas Robert Malthus

Emboldened by Paul Ehrlich's failed wager with the late Julian Simon on metal prices in the 1980s, the cornucopians say science, that ultimate provider of hope, can devise technologies to recover mineral wealth from the core of the earth. An improved method of fast extraction and exploitation of natural resources (oil and other minerals) may increase the current output levels, but it does not mean the resources are infinite. Ironically, it might well mean the faster depletion of resources. For, when all is said and done, the bottom line is that resources are limited.

Using the classical hare-tortoise race as a metaphor, Malthus suggested trying to "raise the quantity of provisions" even while working to slow down population growth — which is the essence of modern-day sustainable development.[31]

It would be a foolish stretch of reason to believe that the earth can support 15 billion people or even

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

more. The truth is staring at us right now from every corner of the world: countries are struggling to support even the current global population of nearly 6 billion. Eighty-six countries are currently classified as low-income food-deficient by the U.N. Food and Agricultural Organization. As many as 1.3 billion people — more than the combined population of Europe and North America — live in absolute poverty on the equivalent of one dollar or less per day. More than 840 million people are under-nourished today, and even with all possible improvements in food production, there will still be at least 680 million under-nourished people in the world in 2010.[32]

While it may be easy for some of the critics from rich European or American nations to shed tears over falling fertility rates in Europe and discount the fears of overpopulation and its impact, it will be worthwhile to heed the cries of those poor overpopulated countries that suffer the painful, first-hand consequences of overpopulation. Their illiterate, impoverished millions, their overcrowded cities and parched farmlands can be transformed only by a concerted global conviction and effort.

Malthusian prophecy may not come true in this century or the next, but if we don't act now to stabilize population growth along the lines proposed at the 1994 International Conference on Population and Development it will be difficult to rule out that doomsday in future. It will be in the world's interest to prove Malthus wrong. And Malthus would have welcomed it, as he suggested in the preface to his "Anonymous" first *Essay*:

> *If he (the author) should succeed in drawing the attention of more able men to what he conceives to be the principal difficulty in the way to the improvement of society and should, in consequence, see this difficulty removed, even in theory, he will gladly retract his present opinions and rejoice in a conviction of his error.*[33] TSC

SELECTED REFERENCES

An Essay on the Principle of Population by Thomas Robert Malthus, edited by Philip Appleman, W. W. Norton and Company, New York, 1976

Full House: Reassessing the Earth's Population Carrying Capacity, The Worldwatch Environmental Alert Series, by Lester R. Brown and Hal Kane, W. W. Norton and Company, New York, 1994

State of the World, 1998, Lester Brown and others, Worldwatch Institute, Washington, DC, 1998

Vital Signs 1997: The Environmental Trends That are Shaping Our Future, Lester R. Brown and others, Worldwatch Institute, Washington, DC, 1997

World Population Data Sheet, 1997, Washington, D.C.: Population Reference Bureau, 1997

State of the World Population, 1997, United Nations Population Fund, 1997

Resource Conservation, Population and Sustainable Development, Washington: *Toward the 21st Century,* The Population Institute, 1997

"Food Security Depends on Family Planners," *Popline,* Population Institute, Washington DC. January-February 1997,

The 1997 World Population Overview, Washington: *Toward the 21st Century,* The Population Institute, 1998.

Population in the 21st Century: UNFPA and Agenda 21, United Nations Population Fund, New York, 1997

Population & Sustainable Development: Five Years After Rio, United Nations Population Fund, New York, 1997

World Resources: A Guide to the Global Environment – The Urban Environment 1996-97, A joint publication by The World Resources Institute, The United Nations Environment Programme, The United Nations Development Programme, and The World Bank, Oxford University Press, New York, 1997

Human Development Report 1997, United Nations Development Programme (UNDP), Oxford University Press, New York, 1997

The Population Bomb, Paul R. Ehrlich

The Most Overpopulated Nation, Paul R. and Anne H. Ehrlich

How Many People Can the Earth Support? Joel E. Cohen, W. W. Norton and Company, New York, 1995

Critical Masses: The Global Population Challenge, George D. Moffett, Viking, 1994

Last Oasis: Facing Water Scarcity, Sandra Postel, The Worldwatch Environmental Alert Series, W.W. Norton & Company, New York

The State of World Population, 1997, New York: United Nations Population Fund, 1997

World Population Prospects: The 1996 Revision, United Nations Population Division, New York, 1997

"Future Population May Overwhelm Food Supply," *Popline,* The Population Institute, November-December 1997.

"Developing World's Quality of Urban Life is Declining," *Popline,* The Population Institute, November-December 1997

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"Urbanization spurs Return of Diseases," *Popline,* The Population Institute, September-October 1997

"Population Surpassing Cropland Productivity," *Popline,* The Population Institute, September-October 1997

"1 in 8 Plants in Global Study Threatened," *The Washington Post,* April 8, 1998, A1; "One in every 8 Plant Species is Imperiled, a Survey Finds," *The New York Times,* April 9, 1998, A1

NOTES

[1] Joel E. Cohen, *How Many People Can the Earth Support? W. W. Norton and Company, New York, 1995, p.5.*

[2] ibid., p.7.

[3] Philip Appleman, ed., *An Essay on the principle of Population, Thomas Robert Malthus, A Norton Critical Edition,* W. W. Norton and Company, New York, 1976, p.6.

[4] ibid., p.6.

[5] ibid., pp.19,20.

[6] World Book Encyclopedia, references under "Ireland, Famine."

[7] Appleman, pp.24,36 (Malthus' *Essay,* Chapters II, V.

[8] U.S. Census Bureau, International Population Center (www.census.gov/ipc/www), Population Reference Bureau's World Population Data Sheet (www.prb.org), UN Population Division's World Population Prospects, 1996 revision.

[9] ibid.

[10] UN Food and Agricultural Organization's list of low-income, food-deficient countries, 1996.

[11] U.S. Census Bureau, etc.

[12] Testimony of Werner Fornos, president of the Population Institute, before the Foreign Operations Subcommittee of the U.S. House of Representatives Committee on Appropriations, Washington, DC, March 31, 1998.

[13] "Urbanization Spurs Return of Diseases," *Popline,* The Population Institute, September-October 1997.

[14] Appleman, p.23, Malthus' *Essay,* Chapter II.

[15] Lester R. Brown and others, *State of the World, 1998,* A Worldwatch Institute Report, W. W. Norton and Company, New York, 1998, Chapter 5" "Struggling to Raise Cropland Productivity, p.78.

[16] ibid., p.88, "Population Surpassing Cropland Productivity," *Popline,* The Population Institute, September-October 1997.

[17] ibid., p.91, "Future Population May Overwhelm Food Supply," *Popline,* November-December 1997.

[18] International Food Policy Research Institute, Washington, DC, Discussion Paper 14, p.5. Also see Scherr S.J. and Jadav S., *Land Degradation in the Developing World: Implications for Food, Agriculture and the Environment to 2020,* quoted in "Food Scarcity for a Growing World Population," Novartis Foundation for Sustainable Development, 1998.

[19] Population Action International: sustaining Water, Easing Scarcity, quoted in *The Washington Post,* "What On Earth?" January 10, 1998, p.A16.

[20] World Resources Institute, *World Resources 1992-93,* Oxford University Press, New York, 1992, p.111.

[21] Lester Brown and others, *Vital Signs, 1997,* W. W. Norton and Company, New York, 1997, p.96.

[22] Janet N. Abramovitz, *Taking a Stand: Cultivating a New Relationship with the World's Forests,* Worldwatch Paper 140, Worldwatch Institute, 1998.

[23] "1 in 8 Plants in Global Study Threatened," *The Washington Post,* April 8, 1998, p.A1; "One in Every 8 Plant Species is Imperiled, a Survey Finds," *The New York Times,* April 9, 1998, p.A1.

[24] Appleman, etc., Malthus' *Essay,* Chapter I, p.20.

[25] World Health Organization and Population Reference Bureau's World Population Data Sheet, 1997, *The 1997 World Population Overview,* Washington: *Toward the 21st Century,* The Population Institute, 1998.

[26] Jay Olshansky and others, *Infectious Diseases — New and Ancient Threat to World Health,* Population Reference Bureau Bulletin, 1997.

[27] Appleman, etc., Malthus' *Essay,* Chapter IV, pp.33-34.

[28] ibid., Malthus' *Essay,* 1803 Revised Edition, Chapter I, p.132.

[29] ibid., Chapter IX, p.136.

[30] Nafis Sadik, executive director, UNFPA: Closing remarks at the International Conference on Population and Development, Cairo, 1994.

[31] op.cit., Appleman, etc., p.133.

[32] UN Food and Agricultural Organization, *Food, Agriculture and Food Security: The Global Dimension,* (World Food Summit Document WFS 96/Tech 1) Rome, 1996.

[33] Appleman, etc., Preface to Malthus' *Essay on the Principle of Population 1798 edition, p.16.*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Malthus—Right or Wrong?

That depends on what part of the globe we're considering — climate is supremely important

by William C. Paddock

Two hundred years ago, T. Robert Malthus published his *Essay on the Principle of Population as it Affects the Future Improvement of Society*. Essentially it said farmers cannot produce food as fast as "the passion between the sexes" can produce people, thus Man is doomed to a future of famine, poverty, and the horsemen of the apocalypse. The prediction was so logically expressed that it set off an immediate debate that still continues. "Is Malthus correct?" — or, phrased differently, "Can our civilization survive?"

One side, the neo-Malthusians, such as Stanford's biologist Paul Ehrlich (*The Population Explosion*), predicts doom unless population growth stops. The other side, the pro-natalists, represented by the late professor of marketing Julian Simon[1] and journalist Ben Wattenberg,[2] maintains that instead of worrying about too many people, we should worry about too few people or "an emptier planet." Which is correct?

That a man in 1798 could write an essay still being argued about is not surprising when one remembers his times. Malthus was no country bumpkin. He was well-educated, a mathematician, a student of his period, corresponding regularly with Europe's leading philosophers and economists. His was a yeasty age, on the cusp of the Industrial Revolution, when Luddites protested machines making labor redundant, while agriculture boomed by using new crops from the Americas and new science from England's recently established agricultural schools.

Malthus, growing up in rural England, thoroughly understood agriculture, but his experience was limited to the temperate zone. He assumed all the world functioned like Europe. He had no knowledge of the tropics. In a strange, twentieth-century way, today's pundits have an even narrower vision. In spite of their travels in the tropics, most lack experience with tropical farming, or, for that matter, agriculture of any kind. Like Malthus, today's savants see ours as one homogenized world, a mass of humanity copulating and farming with the end result the same for all.

> Like Malthus, today's savants see ours as one homogenized world, a mass of humanity copulating and farming with the end result the same for all. Nothing is further from the truth.

Nothing could be further from the truth.

The world has many different climates, each affecting man's ability to feed himself. However, fundamentally, our earth is divided into two distinct worlds: the tropics — that portion of our planet between the Tropic of Cancer and the Tropic of Capricorn — and the temperate zone, above and below those latitudes. The difference between the two *must* be considered in any Malthusian discussion.

Much of the temperate zone has already brought its birth rate into balance with the death rate and in areas the population now grows negatively. Furthermore, the wizardry of most 20th century agricultural science is applicable only to the temperate zones which also possess the agricultural advantage of cooler weather, better soils, and longer days. It is here in the temperate world, and *only* here, that the views of the pro-natalists Simon and Wattenberg are applicable.

The tropics are different. Not only are they cursed with 75 percent[3] of the world's population

---

William Paddock, Ph.D. *has been working, traveling or living in the tropics, beginning in 1952 with a position as professor and director of the Iowa State College-Guatemala Tropical Research Center. Among his books, he and his wife co-authored* We Don't Know How, an independent audit of foreign aid *(Iowa State Univ. Press, 1973). E-mail: wpaddock@aol.com.*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

growth, they also have an agriculture that can neither adequately feed its people nor make use of modern science. As regards the tropics, Ehrlich and Malthus are 100 percent correct.

Archaeologists tell us that civilizations arise when farmers can grow more food than they and their families can eat. It is the farmer's *surplus* that makes a civilization possible. There are some minor exceptions where a people are blessed with something besides agriculture with which to trade — gold, oil, copper, or manufactured TVs or automobiles. But in the end it's the same: no food *surplus*, no civilization.

The surplus is dependent only in part on the productivity of the farmer. It is *equally* dependent upon the *number* of people that must be fed. If each farmer is productive enough to feed ten people, nine people are freed to build a pyramid, write a poem, design a computer. But when the population explodes and there are twenty to be fed, then everyone must grub for food. Famine threatens, disease follows, and war prevails among groups, tribes and nations. This simple fact has been lost to us in the temperate West because 98 percent of the citizens are far-removed from the farm. Thus, our leaders direct foreign policy with no understanding of the resource base of the world's poor. Efforts to stabilize governments or feed the hungry fail as troops are sent to Haiti and Somalia, food to Ethiopia, and fact-finding groups to Central America. Some may puzzle, "What's wrong with our help?" but no one asks, "What's wrong with the *tropics*?"

What's wrong with the tropics is geography which so restricts the farmer he can't produce enough *surplus* to support even today's civilization — jobs, houses, schools, highways, and democracy. And every day there is less surplus as more people arrive on the scene to share it. Our decision-makers extend foreign aid as a substitute for a surplus and believe that in so doing they will prevent a Malthusian disaster. They wear the same blinders as the sovietologists of the late 1980s who, not seeing the paucity of the Soviet surplus, could not see the coming collapse. Over 90 percent of the area is difficult or impossible to farm because it has less than 20 inches of rainfall a year, or too short a growing season (Moscow is as far north as Canada's Hudson Bay).

The misunderstood tropics

The *tropics* — the very word conjures up a lush, verdant dream world. The *tropics* — where one can loll all day in a hammock and pluck a banana from a tree. The *tropics* — where one can toss some seed on the ground and then jump back as the plants burst forth from fertile soil. The *tropics* — where the ease of living makes its people indolent, slothful, shiftless. The *tropics* — to which, lacking in Yankee get-up-and-go and ingenuity, we must ship our food and send a dole to prop up the governments.

How false is that view!

"Only in the temperate world are the views of the pro-natalists Simon and Wattenberg applicable. For the tropics, Ehrlich and Malthus are 100 percent correct."

John Kenneth Galbraith, in *The Affluent Society*, said that everything 500 miles north and south of the equator is undeveloped, and it's not by accident. He could have said 1200 miles, for the whole tropical area is cursed with "development" problems. Except for temperate zone China, the former Soviet Union and its periphery (where much of the area is too cold or dry for good agriculture), nearly every poor country in the world is *in* the tropics. After fifty years of development effort, including a trillion dollars[4] in foreign aid, the recipient countries remain the *less well-developed, emerging, less privileged, have-not, catch-up, low income, needy, poorest third, recipient, expectant, restless* — all euphemisms for *tropical*. Washington officials who have never farmed the area tell us the people there are poor because they need land reform, agricultural research, better banking systems, democracy, education, more health clinics, loans, etc. None are basic causes for the poverty.

The Hudson Institute's founder, Herman Kahn, used to quip that the United States was lucky to have developed its resources before the Rockefeller Foundation brought it modern medicine. The tropics were not so lucky. During the last fifty years, before anyone could improve farm techniques, an army of do-gooders — foreign aid technicians, Peace Corpsmen, missionaries — evangelized throughout

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

the tropics on the advantages of boiling water, sanitation, and modern medicine. They brought death control without birth control. The population exploded and we still don't know how to better farm the area. Until now, the additional people have largely been fed by farming further into the rain forests and farther up the hillsides.

In the late 1960s new varieties of wheat and rice were developed to better use irrigation and fertilizer. A Green Revolution was said to have been caused by the resulting yields — the term was coined by the head of the U.S. foreign aid program in a fund-raising speech, and was one the press loved. No facet of the international foreign aid effort, then twenty years old, ever received such laudatory praise with so little examination. The Green Revolution hype was oblivious to the fact that it was largely limited to just two crops and to the temperate zone. The ignorance was reflected in the announcement by the 1970 Nobel Peace Prize Committee in its preposterous statement that the Green Revolution:

1) *"made it possible to abolish hunger...in a few years"*
2) *"contributed to a solution...of the population explosion"*
3) *"in short we do not any longer have to be*
4) *pessimistic about the economic future of the developing countries."*[6]

"First, right off, let's make it clear: for the 20th century Malthus was wrong about the passion between the sexes."

Population

First, right off, let's make it clear: for the 20th century, Malthus was *wrong* about the passion between the sexes. While that may get a president into trouble, it is not the cause of today's population growth. The current population explosion is due not to a rising birth rate but to a falling *death* rate. The near equilibrium between births and deaths which had existed for centuries with a slow rise in population was shattered fifty years ago by the efficiency of the medical and public health professionals.

Previously, growth had been creeping up for ancillary reasons (better transportation of food, opening of virgin lands, discovery of the causes of diseases, etc.). But the major, overwhelmingly catastrophic blow to the quasi-equilibrium came between 1936 and 1940 with the discovery of sulfas, penicillin, and DDT — the latter probably the cheapest and most effective insecticide the world will ever know. In the 40 years before 1940, the population of Mexico grew by 50 percent; in the next 40 years it grew five times faster. The same happened in varying degrees throughout the developing world. Sri Lanka's death rate was cut in half during the five years following World War II. DDT's control of the malarial mosquito doubled British Guiana's population in ten years. Haiti, with only 1,000 doctors, extended the life expectancy of its seven million citizens from 33 to 55 years. The world had begun adding more than a billion people every generation.

Today, birth rates are falling everywhere, which is why the popular press is worrying about the "birth dearth" and the "population implosion." Unfortunately, as with agriculture, there are two separate population worlds, one temperate and one tropical. Those countries where couples have two-or-fewer children live in the temperate zone of Europe, the U.S., Canada, Japan, South Korea, etc. (plus a few exceptions like Thailand and Singapore). Temperate China, with its severe population control policies, may soon be in this category.

In contrast, consider tropical Africa, Asia and Latin America. There women still average four or more children and, unlike in the past, most of the children live. There, too, a third or more are under the age of 16 and coming into child-bearing age. For years to come any future drop in the birth rate will be canceled by an increasing number of women having children.

Historian Barbara Tuchman says, "Size of population affects studies of everything — taxes, life expectancy, commerce and agriculture, famine and plenty,"[6] i.e., civilization itself. Civilization in the temperate zone with its stabilizing population does not seem threatened. But the ghost of Malthus stalks the tropics.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

How much food is needed?

Population in the tropics already exceeds the carrying capacity of the soils. If a Malthusian disaster is to be avoided food will have to shipped from the temperate zone. Malthus wrote that population expands to the limit of the food supply and, therefore, food aid artificially increases the size of the population. As long as the population of the tropics lacks the motivation to stop its growth, food aid only postpones the inevitable.

The world now has 4 billion people that are poorly fed. A Hunger Program report from Brown University[7] estimates that one billion people do not receive enough food for an "active work life" and another nearly half billion either receive an insufficient amount of food for the normal growth of a child or for minimal activity as an adult. But hope springs eternal among the pro-natalists who point out that statisticians have calculated that the world's agriculture actually produces enough food to feed everyone. The problem is not too many people but, they say, poverty and/or uneven food distribution. There is no evidence this will change.[8] For fifty years the World Bank and foreign aid have tried and failed to reduce the number of poor.[9] However, if poverty should decrease, the remaining poor are in a Catch 22. Decrease poverty, food demand rises, prices escalate, farmers respond by using more marginal, erodible soils. More food results, but its cost is higher and the poor are still hungry.

In the next 25 years the world's population will surely increase by two billion, three-fourths of which will be in the tropics where, surprisingly, the greatest threat to the poor will be a new affluence. Since 1990 one-world banking, one-world markets and free trade, one-world capital chasing cheap labor, and one-world transportation which makes the results available to everyone overnight — these have combined to produce a new affluent class *everywhere*, including the poorest of poor countries. Because of its greater wealth, affluence threatens the temperate zone's resources the most — a fact ignored by the pro-natalists. But it is a worldwide threat. For example, the 17 five-star hotels in India's capital use as much water as do 1.3 million of India's poor who lack plumbing. The first thing newly affluent people is upgrade their diets, which means they eat more meat. When a family has a pound of chicken on Sunday rather than lentils and rice, the grain use goes up that day by 4 pounds — if it's beef, 7 pounds. In China during the 1990s this rise in affluence alone accounted for two-thirds of the increased grain consumption. Even though its agriculture has the advantages of the temperate zone one authority, Worldwatch Institute's head Lester Brown, sees China as a threat to *all* hungry nations. He believes China's rising affluence will demand, and pay for, the world's entire export supply of grain. Goodbye famine relief, hello Malthus.

There are a hundred different estimates of how much additional food will be needed for the population in the future. The one I prefer, and which is similar to many others, is that of Iowa's *Wallace Farmer*, a publication far closer to the export market than Washington's think tanks. It projects a 300 percent increase in *demand* for food in the next thirty years.[10]

Tropical agriculture is not now able, nor will it be able in the future, to keep up with its population growth. Twentieth century science has impacted largely on the temperate zone, not the tropics, as demonstrated by Norman Borlaug, father of the Green Revolution. In the 1940s he was hired by the Rockefeller Foundation to work in the tropics on Mexico's basic food, corn. As would be expected, tropical southern Mexico has more malnutrition than its temperate North. Borlaug, resisting orders from the Rockefeller Foundation,[11] turned his back on the tropics to work on the country's luxury grain, wheat, in northern Mexico on its most productive irrigated land. The wheats he developed proved revolutionary in the temperate portions of Mexico, India, and other similar areas.

When a tropical country is largely agricultural — and most are — then the production from its climate-dependent farmers results in a surplus so small its people are impoverished. A 1993 declaration by the revolutionary Zapatistas, issued from Chiapas in tropical Mexico, tells it all:

> *We have nothing to lose, absolutely nothing, no decent roof over our heads, no land, no work, poor health, no food, no education, no right to choose our leaders freely and democratically, no independence from foreign interests, and no justice for ourselves and our children. We are the millions of dispossessed, and we call upon all our brethren to join our crusade.*[12]

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Problems of the Tropics

Farm problems of the tropics result from (1) the heat, (2) non-glaciated soils, and (3) the length of day. We're 10,000 years too late to do anything about the glaciers, but if we knew how, we could tilt the earth and correct the other two problems.

Generalities are hard to make for the tropics because they vary so greatly. For instance, snow is found the year around at the equator on peaks in Ecuador and Tanzania. But where most people live one thing is certain: farming is extremely difficult. Plantation agriculture (coffee, rubber, sugarcane, bananas, *etc.*) succeeds in the tropics because it concentrates the capital needed to combat the obstacles. In recent years we have seen two examples of areas where governments have tried to ignore the limitations. In the first case, Fidel Castro announced when he took over Cuba: "we will abolish our slave master, sugarcane." Cuba has tried a variety of alternative crops but sugarcane remains the country's slave master; climate is a more severe dictator than Castro ever thought of being. In the second case, when the university-trained Sandanistas took over Nicaragua, they announced a plan to stabilize the price of corn by stabilizing production. The plan was to increase irrigation and plant monthly. The result: with corn always available to support the multiplication of pests, there was no corn to harvest.

Heat

Too much heat can reduce crop yields in several ways. Corn breeders measure heat by Growing Degree Units (GDU). Iowa usually receives the right number of GDUs — Texas, too many for optimum yield. Guatemalan and Honduran corn suffers the most at latitude 15° (+/- 5°), receiving more heat there than anywhere else in the world. Cool nights in Iowa reduce the number of GDUs there, but not in the tropics.

Tropical environments are tough environments for man, beast and plant. South Florida, which is not even in the tropics, was a wasteland before air-conditioning. High temperature increases respiration and biological activity; organic matter needed for nutrients and soil tilth quickly rots and, with rains, easily leaches away. The tropical peasant can lose as much or more of a crop in storage as in the field, as heat speeds the growth of weevils and fungi. Losses of a staggering 20 to 40 percent of their harvests are reported, for example, in Brazil, where storage losses to beans have been large enough to cause periodic food shortages.[13] addition, high respiration rates require more energy for the tropical farmer who needs more calories than if he lived in a milder climate. In the low Latin American tropics you see no draft animals, no horses nor oxen, while you see some in the cooler highlands. An explanation is that the soils are so unproductive in the lowlands that the farmer, after feeding his family, has nothing left over for a draft animal.

A high percentage of soils in the humid tropics are acid, in part because high temperatures not only accelerate biological activity but chemical breakdown of soils as well.[14] Acid soils reduce the availability to plants of some essential nutrients.

Lack of Glaciation

When scientists have done everything possible to adjust the soils in the Amazon Basin, using all necessary nutrients, the land produces no more than half what one would expect in the U.S. Midwest.[15] Something besides the nutrients and pH inhibit yields. A look at global maps of soils shows that poor soils dominate in the tropics while the more fertile soils are in the temperate zones. One reason is that the southern latitudes were never glaciated and thus lack the substructure needed for high fertility.[16] I have a farm in Iowa that was glaciated and it consistently out-produces another farm I own 24 miles further south, and which was not. Poor soils make poor nations.

Length of Day

In addition to heat and soils, there is still another inherent limiting factor in the tropics. At the peak of northern Iowa's growing season, crops have days of 15½ hours while at the equator there are only 12. Thus, Iowa farmers receive 3½ more hours of light with which to manufacture carbohydrates and fatten their harvests than do those at the equator. The same applies to Asia's rice, a crop generally considered tropical but which produces its top yields in temperate Japan.

Difficulty of Farming in a Hot Climate

Cold weather is a farmer's helper for it kills or slows the progress of pests, including weeds. When corn is planted in Iowa around the first of May, the soil is cold, germination is slow as is all plant growth for the next several weeks. This allows the Iowa

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

farmer time to control weed growth with several cultivations. By the time temperatures rise and corn is "knee high on the 4th of July," any remaining weeds are shaded and do not compete with the corn. In contrast, the farmer in the low tropics tries to plant just before the rains begin,[17] but not too early or the birds will eat the seed. This happens to be the hottest time of the year so when the rains come, the corn *and weed seeds* germinate immediately. The farmer quickly begins to cultivate the corn. By the time he has hoed a few hundred feet, he must start all over again to kill new weeds popping up behind him. A tropical peasant with a hoe may farm only four or five acres. The early Iowa settler, with a horse, farmed 40 or more acres, raised more corn than he could use, sold the surplus and eventually he and his neighbors became rich enough to support Iowa's schools, roads, etc.

In large areas of the tropics the life of the peasant has changed little during the past 500 years. He still suffers from an assortment of afflictions — malaria, worms, dysentery, etc. — and while he may now have a hoe and a machete, implements of steel rather than stone, his ancestors may have found it easier to farm.

Where slash-and-burn agriculture is the norm, the peasant formerly would let his unused land lie fallow for a number of years — the longer the better. Seven to nine years is best for then there is time for enough brush and weed growth to give an intense "burn" prior to planting. Now, with today's greater population, the resulting land shortage requires fallows of only four, maybe three or less years — too short a time to produce enough weeds for a fire hot enough to do a good job of killing the weed seeds, insect eggs and fungi. Likewise, fewer nutrients are released for the crops since less heat cracks open fewer soil particles. Population pressure in the tropics means lower yields per acre.

It is said that because of year-round warmth tropical farmers have an advantage over temperate zone farmers by growing two, three or four crops a year. In a few cases, such as irrigated rice, this is possible. For most crops there are not enough days in a year for more than two harvests. But it is not an easy thing to raise two crops. When I have done it, the build up of insects and diseases on the first crop often made the second crop not worth the effort.

Finally, the weather is more variable and less reliable in the tropics than in the temperate zone. Historically, temperate zone famines are due to disease and insects destroying the crop (e.g., the Biblical locusts of North Africa and the famine in Ireland caused by a fungus killing the potato). In contrast, famines in the tropics result from droughts due to a failed monsoon or short rainy season. Twentieth century science can usually control the plant pests, but can do nothing about the weather.

Can the tropics prove Malthus wrong?

The people of the tropics have two options for defeating Malthus: 1) a short term one of increasing farm production and 2) a long term one of stopping population growth.

INCREASING FARM PRODUCTION

There are almost always ways to increase farm production. For example, more fertilizer or irrigation. But further use is always threatened by the Law of Diminishing Returns. Malthus, who independently discovered this law, showed his irritation with those unfamiliar with farming when he first wrote about it saying it should "be evident to those who have the slightest acquaintance with agricultural subjects..." The law explains both why a second candy bar doesn't taste as good as the first and why there is a limit to how much fertilizer and irrigation can be used profitably. Thus, in the developing countries between 1970 and 1990, fertilizer use grew by 360 percent with a similar growth in new irrigation projects. But these greater inputs were not all cost effective, so fertilizer use and irrigation are now actually declining. Since 1970, a string of international agricultural research stations has been built around the world but in spite of great expectations, there are no new agricultural breakthroughs on the horizon. If, indeed, 21st century plant breeders and DNA engineers surprise

"In large areas of the tropics the life of the peasant has changed little during the last 500 years."

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

us with a breakthrough, it is likely to be temporary. The Mexican experience shows why.

In 1941 Mexico was essentially food self-sufficient when the Rockefeller Foundation replaced its medical team there with a team of qualified agricultural scientists given the specific goal of increasing yield per acre of two basic foods: corn and beans. And they succeeded. But, *a la* Malthus, yields rose only about half as fast as did the number of Mexicans, and in less than forty years Mexico was importing a quarter of its food.[18] Today, even though an estimated ten percent of the population increase has emigrated to the U.S., 66 percent of the remaining population suffers from some form of malnutrition. From 1970 to 1990 malnutrition of rural children doubled.[19] Even if science were to find an agricultural breakthrough for the tropics, the result would only postpone a crisis so long as population growth continues.

"During Zamorano's 55 years, Central America's population has grown from seven million to 35, destroying any chance for an educated youth to feed tomorrow's world."

STOPPING POPULATION GROWTH

There is but one way to avoid the Malthusian disaster. Stop population growth. Malthus' world was one where nearly everyone farmed and towns were mere hamlets. The world at that time had only two cities with a million people: London and Paris. By 2020 there will be seven megalopolises, each with 20 million people, and all but one will be in the developing world. Now nearly three billion people live in cities. This explosive urbanization, most of it occurring just since 1970, is changing mankind as dramatically as did the switch from hunting and gathering to agriculture 10,000 years ago.

As mentioned previously, the tropics have seen a fall in the birth rates (outpaced by a fall in the death rates) due largely to this urbanization.[20] Farm poverty pushes the rural poor into the cities which now absorb 90 percent of the population growth. The festering masses of urban poor have needs for jobs, food, housing, education — needs which tropical governments cannot satisfy. The cities become pressure cookers of civil unrest simmering with deprivation, injustice and hunger, ready to explode into lawlessness. Every tropical government wants to keep the rural farmer out of the city and down on the farm. Since they do not know how to make farming more profitable and thus more appealing, the farmer, along with everyone else, must be convinced to *want fewer* children.

Is this possible? Yes, if there is a will. A hallmark of the 20th century is its advertising industry which seemingly can sell anything — refrigerators to Eskimos or the concept "stop at two" children. Will we use this talent to prove Malthus wrong? Future historians will say, "no," that our leadership was too gutless. That harsh conclusion is based on what recently happened in a situation that was *ideal* for action.

Honduras is a tropical country but far luckier than most. While two of its cities have had explosive growth, 60 percent of the labor force still works the land producing 75 percent of its export earnings. Through the vision of an American agricultural industrialist, Honduras possesses the world's finest tropical agricultural college, known as Zamorano. It is autonomous, richly endowed with a six square mile campus, dozens of architecturally uniform buildings of hand-cut stone, and a distinguished teaching and research faculty. This is no rinky-dink school! Highly competitive entrance requirements and tough academic standards have produced thousands of graduates who have become ministers of agriculture, heads of research departments, leaders in all phases of agro-business, collectors of countless advanced degrees from the best U.S. universities, and, most importantly, farmers and farm managers. The college serves all of Latin America but Honduras benefits the most from its presence.

Furthermore, Zamorano's Board should be as enlightened as any in the world, having had among its members through the years: a Rockefeller Foundation president, a Peace Corps director, U.S. university chancellor, Nobel laureate, Boston Brahmins (some on the Harvard Board of Overseers) along with Latin American movers and shakers. It is a group which recognizes the world food problem by the slogan it has adopted: *Teaching*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Today's Youth to Feed Tomorrow's World.

How successful have Zamorano's graduates been in feeding the people of Honduras?

Fifty percent of the Honduran diet is corn with more land planted to that crop than all other crops combined, yet the price of corn is about three times higher than its price in Iowa. The country's average corn yield in the 1970s was 18 bushels to the acre; in the 1980s 19 bushels, and in the 1990s 20½. In Iowa, for comparison, the yield is 135 bushels per acre.

Honduras' exploding population has largely been fed, as in other tropical countries, by farming farther and farther up the hillsides and farther into the rain forest — and by importing food with the help of foreign aid. Nevertheless, per capita agricultural production has been falling since the 1970s at about 1.3 percent each year. A not surprising result: forty percent of its school children show chronic malnutrition with the percentage increasing. Honduras ranks 38th from the bottom of the world's poorest nations with per capita income dropping from $720 in 1985 to $600 in 1996 despite receiving an almost unbelievable $1.4 billion of U.S. foreign aid during that period.

A more honest reply would have been, 'We are scared as hell of the word population.'"

Why the failure?

During Zamorano's 55 years, the population of Central America has grown from 7 million to 35 million, destroying any chance for *an educated youth to feed Honduras' tomorrow.* The stress imposed on Honduras by its current population size — still growing at 3.2 percent a year, doubling every 22 years — is more significant to its future than any historical event, overriding even the importance of the Spanish Conquest of the 1500s or the independence movement of 1820.

On its 50th anniversary, Zamorano's board, looking ahead at the coming years, instituted a self-examination and future planning program for the institution. Changing times suggested changing approaches. When the college was founded, population was a non-issue and the teaching of youth *to feed tomorrow's world* merited an approach quite different from that required by today's demographics. Alas, the study totally ignored population as a factor and its threat to the goals of the college.

When the shortsightedness of the omission was pointed out to a long time Zamorano trustee, the question was asked: "What should Zamorano do?" A report to the board resulted, written with the input of several who recognized Honduras' potential as a showcase for the tropics. A plan was submitted showing that if educated youth were to feed the Honduras of tomorrow, Zamorano must help stabilize the country's population growth. Knowing that birth control or family planning might frighten the board, the plan recommended ignoring the subject and instead concentrating on the sale of a single idea: *more people mean more problems.* Listed were consultants and organizations with experience in motivating populations to want fewer children through the use of radio and TV soap operas, 30-second radio commercials and high-impact billboards. Possible sources of funding were identified and $5,000 was offered to pay for two or three resource people to lead a discussion with the board.

And what was the response?

"We all agree that Zamorano is not in the birth control business." The board's agenda will be too full" to consider the submitted proposal. A more honest reply would have been, "We are scared as hell of the word *population.*" And so, as President Truman reminded us, "a great, serene and peaceful future can slip from us quite as irrevocably by neglect, division and inaction, as by spectacular disaster."

Zamorano's timidity explains the on-going tragedy of the tropics. During the next 30 years the population of the tropics will double. Many countries, like Honduras will double sooner. More people does not just mean more hunger, but more problems of every kind. It means more teetering governments juggling democracy in an anarchical climate of repression, coterminous with revolution.

Welcome to the 21st century.

Our planet is strewn with the remains of civilizations — as often destroyed by depleted soils as by a poor day on the battlefield. If today's tropical civilizations fall to anarchy, it will not be for lack of warning, a warning given two hundred years ago this month by Thomas Robert Malthus. TSC

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

NOTES

[1] Simon, Julian, "What the Starvation Lobby Eschews." *Wall Street Journal*, November 18, 1997.

[2] Wattenber,g, Ben J., "The Population Explosion Is Over," *The New York Times*, November 23, 1997, p.60.

[3] A well-accepted figure is that 95 percent of population increase occurs in the developing countries. Subtracting numbers for temperate zone developing countries (China, North Africa, Afghanistan, etc. the figure 75 percent seems to be an acceptable calculation.

[4] The amount is considerably larger though nearly impossible to calculate accurately since there are a great variety of aid programs. The trillion dollars is conservative, dating from 1987: Greenwald, John, "Hard Times for Foreign Aid," *Time*, February 9, 1987, pp.38-39.

[5] Weintraub, B., "U.S. Agronomist Gets Nobel Peace Prize," *New York Times*, October 22, 1970, pp.1, 18.

[6] Tuchman, Barbara W., *A Distant Mirror*, 1978, New York: Knopf.

[7] Millman, S. R., *The Hunger Report: Update 1991*. The Alan Shawn Feinstein World Hunger Program, Brown University Press, pp.8-9.

[8] "Sustainable poverty reduction is the overarching objective of the World Bank, the benchmark by which our performance as a development institution will be measured." Lewis Preston, World Bank president. *Poverty Reduction Handbook*, World Bank, 1993, 317 pages.

[9] Ahjlburg, Dennis A., "Population Growth and Poverty," *Population and Development: Old Debates, New Conclusion*, Overseas Development Council, 1994, p.131. "Percentage of people consuming less than $375 per year was constant at 33 percent in both 1985 and 1990, and the number in poverty grew during this time by about 2 percent per year..."

[10] *Wallace Farmer*, March 1996.

[11] He threatened to resign if he did not get his way. Bickel Leonard, "Facing Starvation," *Reader's Digest*, 1974, p.181.

[12] Barry, Tom, *Zapata's Revenge: Free Trade and the Farm Crisis in Mexico*, South End Press, 1995, 317 pages.

[13] Schmidt, Karen, "Genetic Engineering Yields First Pest-Reistant Seed," *Science*, August 5, 1994, p.739.

[14] Sanchez, Pedro A., "Management of Acid Soils in the Humid Tropics," *Management of Acid Tropical Soils for Sustainable Agriculture*, Proceedings of an IBSRAM Inaugural Workshop, pp.65-107.

[15] Interview by telephone with Thomas J. Smyth, Department of Soil Science, University of North Carolina, September 13, 1994. Smyth has done work in Brazil, Guatemala, and the Amazon side of Peru.

[16] Huston, Michael, "Biological Diversity, Soils and Economics," *Science*, December 10, 1993, pp.1676-1680.

[17] A logical explanation as to why the ancient Mayas devoted so much effort to developing an accurate calendar would be their need to determine when the rains would start and thus the time to plant corn.

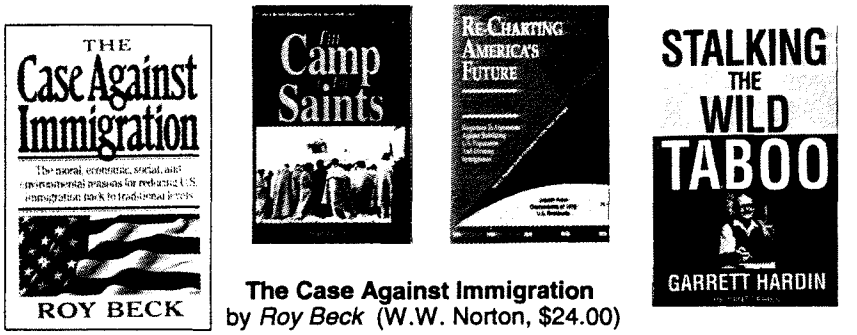
[18] Cummings, Ronald G., *et al.*, "Waterworks: Improving Irrigation Management in Mexican Agriculture," World Resources Institute, Paper #5.

[19] Barry, Tom, *op. cit.*,

[20] Critchfield, Richard, *The Villagers — Changed Values, Altered Lives: The Closing of the Urban-Rural Gap*, 1994.

THE SOCIAL CONTRACT PRESS

Our Four Most Popular Titles



The Case Against Immigration
by *Roy Beck* (W.W. Norton, $24.00)

Stalking the Wild Taboo
by Garrett Hardin (The Social Contract Press, pb $13.00)

The Camp of the Saints
by Jean Raspail (The Social Contract Press, pb $12.95)

Re-Charting America's Future
by Roy Beck (The Social Contract Press, pb $9.95)

Call toll free **1-800-352-4843**

Free catalog available. Visit us at www.tscpress.com.

We also publish *The Social Contract*, a quarterly public policy journal focusing on population, immigration, language and national unity questions. $25 per year. Call for a free sample copy.

THE SOCIAL CONTRACT PRESS, 316½ E. Mitchell St., Suite 4, Petoskey, MI 49770

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Malthus: The Economist

He held the very first British chair in 'political economy'

by Vernon M. Briggs, Jr.

Throughout history societies have built statues, monuments and even pantheons to memorialize the accomplishments of their founders, leaders, and inspirational heroes. Yet many of history's most influential contributors seldom receive such recognition. Such has been the fate of a number of writers in the field of economics. As Robert Heilbroner has so aptly observed, economics has produced "a handful of men" whose contributions to mankind have been "more decisive for history than many acts of statesmen who basked in brighter glory, often more profoundly disturbing than the shuttling of armies back and forth across frontiers, and more powerful for good and bad than the edicts of kings and legislatures."[1]
it, the "extraordinary power of their ideas" has "shaped and swayed men's minds."[2] One such person cited by Heilbroner is Thomas Robert Malthus.

Malthus was a "founding father" of the discipline of economics. But more important than his role as an intellectual pioneer has been the impact of the conceptualizations he proffered and the methodological approach he championed as the way economic issues should be studied and policy conclusions derived.

Malthus was considered 'the outstanding economist of all Europe.'

Although the topical range of his interests was wide, Malthus is best remembered for his inquiry into the causes and effects of population growth. Others before him had speculated on population issues but he was the first to produce a general theory of population in a systematic manner.

Vernon M. Briggs, Jr. is Professor of Economics, Cornell University School of Industrial and Labor Relations. He is the author of Mass Immigration and the National Interest *(M.E. Sharpe, 1996).*

As a Founding Father

In 1804, at the age of 39, Malthus was appointed to the first professorship established in Great Britain for the study of political economy. It was at the newly established East India College located east of London at Haileybury. He assumed the post in 1805 and held the position continuously until his death in 1834. In preparation for this appointment, Malthus had earned a bachelor of arts degree from Jesus College at Cambridge University in 1788. Shortly afterwards he took the vows of Holy Orders at the College and, subsequently, he received a Master of Arts degree in 1791 and was elected as a fellow in 1793 at the same institution. For a short spell, he served as a parish priest prior to his marriage in 1804, after which he pursued a career as an academician.

As a consequence, Malthus has been ennobled by John Maynard Keynes who described him as being "the first of the Cambridge economists."[3] It is a statement of deference. It places Malthus among a hallowed subgroup of economic scholars whose intellectual lineage over the past two centuries has left an indelible imprint on the evolution of economic doctrines. For subsequent "Cambridge economists" included such luminaries as Alfred Marshall, who formalized the principles of what is today referred to as microeconomics, as well as Keynes himself, who formalized the principles of what we now label macroeconomics.

Malthus is better known for having been among the founding members of the "classical school" of economic writers.[4] Collectively, they laid the intellectual foundation upon which much of modern economics has been built. In the immediate decades following the publication in 1776 of Adam Smith's *The Wealth of Nations* — which is regarded as the

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

masterwork that unified a host of miscellaneous ideas into economics as a distinct subject of inquiry — there was immense scholarly activity. But it would not be until 1817, when David Ricardo published his *Principles of Political Economy and Taxation,* that the refinement and the advancement of the corpus of economic doctrines re-commenced in earnest. It was in this interim 41-year period that the writings of Malthus catapulted him to the status of being considered "the outstanding economist of all Europe."[5]

During these early years of disciplinary development, Malthus established a close friendship with his contemporary, David Ricardo. In 1811, Malthus and Ricardo began an on-going exchange of letters that extended over the next ten years. It resulted "in the most precious literary correspondence in the history of economic thought."[6] Their written dialog, as well as the conversations they had during numerous personal visits, served as a form of intellectual pollination. Through vigorous criticism, they stimulated each others' thoughts.[7] Yet, despite the fact that they typically held polar opposite viewpoints, their mutual admiration only intensified as the years passed.[8]

"...tumultuous events occurred in Britain and continental Europe..."

During the years when Malthus rose to prominence, tumultuous events occurred in Britain and continental Europe that dramatically influenced the course of economic thinking. The French Revolution began in 1789 and, after ten years of near anarchy and general mayhem, it led to the seizure of dictatorial power by Napoleon Bonaparte. For the next 15 years, he kept Europe in a nearly continuous state of warfare. As a consequence, the perilous state of international commerce in grains was revealed, while government purchases of foodstuffs greatly stimulated the demand for domestic grain suppliers. In Britain, as elsewhere, extensive amounts of pasture land were converted into arable land (which meant the more costly cultivation of marginally productive lands). Large increases in the supply of money in circulation occurred as the result of the government's need to provision its soldiers and sailors. Prices skyrocketed. Landowners, merchants and manufacturers prospered while the working class masses sank deeper into lives of poverty and squalor. Wages of agricultural workers were set by local government officials who did not permit them to rise. As for the wages of the growing ranks of manufacturing workers associated with the advancement of the Industrial Revolution, severe labor market competition kept these wages depressed as women and children were recruited to fill these jobs.

When Napoleon surrendered in 1813, a host of new problems surfaced in Britain, associated with the re-conversion of the economy. Due to the magnitude of the public debt, payments of the debt by specie had been suspended; taxes remained high; prices soared while wages lagged so that the working masses continued to be pauperized; the powerful agricultural interests, fearing an influx of cheaper imported grains, demanded tariff protection; and the manufacturing and shipping interests were clamoring for concessions and subsidies from parliament.

The supposedly harmonious course of economic development portrayed earlier by Adam Smith was exposed as being at best only an ephemeral description of a bygone pre-industrial era. Seemingly, *The Wealth of Nations* had little of relevance to say about a British society caught in the throes of urbanization, industrialization, and internationalization. The key concerns of economics — production, exchange, and distribution — were being radically transformed by these new social forces.

Illustrative of the search for new ideas was the debate over the tariff question. Both Malthus and Ricardo wrote widely circulated pamphlets on the subject. For centuries, England had adopted various "corn laws" that placed duties on such imports and, at times, provided government bounties on such exports. The word "corn" was generically used to apply to any edible grain (e.g., wheat, rye, barley or oats). During the Napoleonic conflict, domestic corn prices had soared since imports had virtually stopped while demand sharply increased. Agricultural land owners, therefore, were fearful after the defeat of Napoleon that the British Isles would be flooded

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

with grain imports from continental Europe. They argued that it was in the public interest to protect them from foreign competition. They emphasized that they had sustained major costs associated with expanding domestic production during the war years which they had a right to recoup. They also contended that it was not in the national interest for the country to become dependent on foreign food suppliers. Hence, they proposed a sizable increase in the duties on imported corns to prohibitive levels. The proposal triggered a domestic struggle between the powerful land-owning class and the emerging merchant and manufacturing class. Never before had the issue of the distribution of income been so sharply brought to the forefront of public debate.

"...it was not in the national interest for [Britain] to become dependent on foreign food suppliers."

In 1815, the Tory Parliament, beholden to its land owning constituency, passed a new Corn Law which established a high price of corn that had to be maintained before any imports could be allowed. The guaranteed high price of corn also meant that the landlords could continue to extract high rents for the use of their land.

Both Ricardo and Malthus agreed on the basic facts but they came to diametrically opposite views about what they meant and what should be done. Briefly stated, Ricardo correctly predicted that Britain's future rested with capital development, not agriculture. He held that rent was not a creation of wealth but, rather, a deduction of wealth from others. What the landlords gained by protective tariffs was what either business and/or workers lost. But since wages were fixed by market pressures caused by the population pressures created by the working class itself (i.e., he accepted Malthus's views on this point — the poverty of the masses was of their own making), it had to be profits of employers that were lost as a result of high food prices. In other words, food prices and profits moved inversely. Hence, Ricardo attacked the Corn Law with its high tariff provisions. If the duty on imports was abolished, marginal (i.e., more costly) land would be taken out of production, the price of food would fall, and Britain would prosper.[9]

Malthus, on the other hand, defended agricultural protectionism. Malthus, like Adam Smith, saw Britain as primarily being an agricultural society. As a true successor to Smith, Malthus viewed rent as the chief form of surplus (i.e., wealth) that society was creating. Agriculture essentially created its own demand. For while other commodities were not necessary after they were produced, food was, as it represented a demand for population. The reason food prices were high, therefore, lay in its abundance, not its scarcity as is the case with other commodities. Rent was a gift of nature to the owners of land that ultimately increased the wealth of society.[10] Malthus, however, claimed that his support for agricultural protectionism was not intended to be a defense of the interests of landowners. Rather, it rested with his perception of what is the national interest: Britain should be self-sufficient in food production.[11] Hence, he favored the Corn Law of 1815, with its high tariffs so that Britain might prosper.[12]

It may seem strange that Malthus opposed grain imports while his famous population theory foresaw death by famine as the probable fate of a considerable portion of the human race — including many who lived in the British Isles. But it was his opinion that famine conditions within a nation could be better averted by government protection of agriculture than by exposing the masses to the vicissitudes of unregulated market competition associated with the emerging industrial age.

There were numerous other major issues on which Malthus and Ricardo differed but the point is that they honed their arguments on each other and, rightly or wrongly, they elevated the level of economic discourse for all time.

As a Conceptualizer

Malthus made lasting additions to the economic literature with his theory of rent (which greatly influenced the writings of Ricardo) and with his contention that an economy might at times underconsume so that, at least in the short run, it could involuntarily be plagued by unemployment (which greatly influenced the writings of Keynes). But he is best known for his theory of population. As

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

the noted authority on the development of economic thought, Wesley C. Mitchell has stated "Malthus's discussion of population was a contribution of first class magnitude."[14]

The first *Essay on Population* was published anonymously in 1798. As is well known, it was the follow-up product of a lengthy discussion with his father, Daniel Malthus, about the possibility of societal improvement. It occurred at a time when social reformers in both England and France were speaking of the coming of a golden age of equality for mankind. The elder Malthus shared this positive outlook. His son, however, was pessimistic and fearful about the human prospect. Following their talks, the younger Malthus sought to sharpen his arguments by writing them out.

"...the power of population is indefinitely greater than the power of the earth to produce subsistence for man."
— Thomas Robert Malthus

His subsequent treatise set forth the proposition that men were inclined to marry and to multiply their numbers until such time as the available food supply is barely sufficient to support them. As "food is necessary to the existence of man" and "the passion between the sexes is necessary," Malthus felt the optimists were wrong in their assumptions that people could master their physical desires.[15] As he wrote, "I say that the power of population is indefinitely greater than the power of the earth to produce subsistence for man."[16] Population, he stated, is necessarily limited by the means of its subsistence. Population will increase whenever the means of subsistence increases unless the growth is prevented by powerful checks.

In the first *Essay* he identified two such checks. Positive checks are those that reduce an existing population — e.g. famine, war, plague, disease, or infanticide; negative checks are those personal decisions that lead to a decrease in the birth rate which keeps the population from growing (e.g., deciding to marry later or to have fewer children; it could also include the use of contraception and abortions although Malthus adamantly opposed both). As both of these checks on population growth meant unavoidable misery imposed by both the natural world and by human nature, the very characteristics of population itself forever made a state of perfection impossible for human beings.

The dilemma is inevitable, according to Malthus, because population tends to increase at a geometric ratio while subsistence could increase only at a lower arithmetical ratio. The reason for the difference is that there are limits to the amount of usable land available to grow crops and to raise domestic animals for food. To explain his position, Malthus introduces a concept that would later be formally known as the law of diminishing returns (also known as the law of variable proportions). In essence, the law states that as long as one factor of production (say, land) is fixed (or increases at a slower rate) relative to another variable factor of production (say, labor), total production may initially increase, but as more units of the variable factor (labor) are added, total production will inevitably begin to decline and, if carried to an extreme, actually become negative. This argument is hinted at by Malthus as his explanation for the reason why food production tends to grow more slowly than population without being formally identified by him as a specific economic law.[17] This argument, however, gave the theory far more credibility to later scholars (when the law was formally articulated in 1848 by John Stuart Mill) than Malthus's simple assertion of its workings as an explanation for the differential between food and population growth ratios.[18] Ironically, this reasoning, which was elaborated upon by Mill, gave "the Malthusian theory of population a better logical form" that is more convincing than Malthus himself had provided.[19]

The difference between the two potential growth rates meant that the availability of food supplies exerted an ever present restraint on the welfare "of a large portion of mankind." The resulting imbalance also meant that the future of the human race would most likely be one of constant struggle rather than of utopian tranquillity.

The Malthusian notions of inevitable struggle and adaptation, it is worthy to note, would ignite the imagination of Charles Darwin when, 40 years later,

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

he picked up a copy of the *Essay* (probably the sixth edition) to read "for amusement."[20] From this passage, Darwin surmised that natural selection was the likely principle of biological change in nature. Man's perception of the scientific world was never the same.

In the realm of public policy, however, the impact of the first *Essay* was far more immediate. As his biographer, James Bonar, wrote: "Malthus gained his reputation by a bold and sudden stroke, well followed up."[21] Although it had been published anonymously, it was widely known who the author was. The message was clear and easily understood by those who could read — and they were most likely at that time to be the people who paid taxes. The practical policy implication of his message seemed to be that the more funds provided to the poor, the more poor there would be to provide for.[22]

Thus, employers quickly became enthusiastic supporters of Malthus's teachings, for the theory implied that the plight of the poor was of their own or their parents' making. The low wages of the time, therefore, were attributed to the intensity of "the passion between the sexes" and the subsequent abundance of population. Thus, the propertied classes seemed to be absolved from all responsibility for the widespread prevalence of poverty. In fact, it would seem that employers were doing the human race a favor by keeping wages low and making living conditions miserable. In this regard, the Prime Minister of Britain, William Pitt, withdrew in 1800 his pending proposal before the House of Commons to liberalize the existing Poor Laws in Britain. The action was taken in deference to the many objectives raised by those who were influenced by Malthus's arguments.

In addition to its popular success, the first *Essay* firmly established Malthus's professional career. The reaction to the first *Essay* was swift, widespread, and often bitter. Indeed, as Bonar notes, "Malthus from the first was not ignored" and that "it rained refutations" throughout the remainder of his life.[23]

Fearing that he may have been too hasty, he did not re-publish the first *Essay* until it had been thoroughly revised. He engaged in extensive travel, reading, reflection, and gathered what relevant statistical data that was available. The result was the publication of a thorough revision of the *Essay* in June, 1803, with his name appearing as the author. The second edition, while setting forth the same original theme, was "a far more substantial performance than the first."[24] It was expanded by four times in length and it contained far more historical materials and statistical evidence to support his thesis. It also introduced a modification of his theory pertaining to the checks that cause population levels to tend toward subsistence. Namely, he wrote that "moral restraint" could act as a means by which population numbers would be voluntarily limited. The concept was added as a way "to soften" the harsh conclusions of the first *Essay*.

"...the more funds provided to the poor, the more poor there would be to provide for."

In contemporary times, "moral restraint" may seem to be nothing more than a revised name for his earlier concept of "preventive checks." For "moral restraint" simply meant that working class people could use their own forethought to postpone marriages until they had a reasonable prospect of earning an income sufficient to support their prospective families at a level to which they desired to live. Meanwhile, they should practice virtuous celibacy until they can marry. Hence, Malthus uses the concept to mean "a hesitation" by people whereby they could ponder the economic consequences of their potential actions. If they do so, he believed that it would not be necessary for people to suffer from vice and misery. Mankind could, by practicing "moral restraint," create the conditions whereby population size could be held at levels below those that would cause widespread suffering. In so doing, human nature could be brought into harmony with common sense.[25] There is a place for human intelligence.

There were four more revised editions of the *Essay* (the last appearing in 1826) as well as a host of other writings that added empirical support for his population thesis. His views offered sharp contrast to the prevailing mercantilist doctrine which held that the prosperity of a nation depends chiefly on its

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

population. Malthus posited the reverse: the size and welfare of a nation's population depend on the prosperity of the nation. People will, in turn, adjust their lives to the changing economic circumstances they confront. It is not the absolute size of the population *per se* that is the threat to mankind, but, rather, the relative proportion between food and population in a country at a given time that is of consequence. Malthus believed, as Keynes said, "that he had found the clue to human misery."[26] Indeed, Bonar wittily suggested that the *Essay* could also be known as an inquiry "into the nature and causes of the poverty of nations" (a play on the title of Adam Smith's famous book).[27]

"...the prevailing mercantilist doctrine which held that the prosperity of a nation depends chiefly on its population."

As a Methodologist

As with all aspects of Malthus's contributions, even his methodology has been the subject of both high praise and bitter criticism. The earlier path-breaking work by Adam Smith had been, of necessity, a work of deductive logic.[28] *The Wealth of Nations* was not a result of investigation. It was, instead, a product of reflection and of organization of what personal knowledge Smith had accumulated over his lifetime. It was the outpouring of a great mind. Likewise, Ricardo was also a practitioner of deductive reasoning.[29] Ricardo knew little about history and seemed to care less about any lessons it might teach. He did not concern himself particularly with statistics or the gathering of such information as support for his reasoning. Confident that he knew his subject matter and that his premises were absolutely valid, Ricardo proceeded to set forth his analysis in terms of what Mitchell has called "a series of imaginary experiments."[30]

The deductive reasoning used by Smith and Ricardo to fashion their theoretical perceptions and to reach their conclusions about how a free market functions is the legacy that underpins the reasoning of mainstream economics to this day. When confronted with facts contrary to theoretical predictions, the response is that economic theory is concerned with tendencies but its assumptions are beyond questioning. Any facts that deviate from the expected behavior are viewed as only temporary aberrations from what, in the long run, will be results that are consistent with the theoretical expectations.

Malthus had been introduced to the *a priori* methods of Smithian economics and, over his academic life, he too, made frequent use of its mechanistic logic.[31] But, in contrast to Smith and Ricardo, Malthus became well-known for his preference for the use of inductive arguments to support his conclusions.

In his *Principles* book, Malthus makes clear what it is that separates his methodology from the body of analysis that constitutes mainstream economics at that time and to this day. Malthus concedes, as do most economists, that "the conclusions of political economy partake more of the certainty of the stricter sciences then those of most other branches of human knowledge."[32] But, where he differed was in his belief that it is "serious error to suppose that any propositions, the practical results of which depend upon the agency of so variable a being as man, and the qualities of so variable a compound as the soils, can ever admit of the same kinds of proof, or lead to the same certain conclusions, as those which relate to figure and number."[33] As a consequence, he held that "the science of political economy bears a nearer resemblance to the science of morals and politics than to that of mathematics."[34]

History, personal observations from travel, and statistics, to the degree they were available, became the fodder of his intuitive reasoning. As Mitchell described Malthus, "he was a person who wanted to actually observe what went on in the real world and to argue about these observations."[35] It is for this precise reason that Alfred Marshall, likewise, paid tribute to Malthus by stating that his work represented "the first thorough application of the inductive method to social science."[36] Keynes was later to muse that "if only Malthus, instead of Ricardo, had been the parent stem from which nineteenth century economics proceeded, what a much wiser and richer place the world would be today."[37] To which Marc Blaug, a critic of Malthusian economics, has retorted:

It is fortunate for the history of economics that good

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

logic triumphed over bad. A victory for Malthus would have made economics the happy-hunting ground of every quack with panaceas designed to shore up the allegedly defective market economy. One can only marvel at Keynes's astounding assertion.[38]

But there is little justification for Blaug to conclude so dogmatically that inductive reasoning is any more subject to "quackery" than deductive reasoning is subject to charges of being totally irrelevant to the study of the actual welfare of mankind. After all, most of the world's crucial activities are non-mathematical in nature. Inference from experience is at the heart of all of the law, most of medicine, much of biology, some of chemistry, and virtually all of successful business management.

Indeed, contemporary scholars of economic methodology have vigorously attacked the deductive approach that continues to be at the heart of mainstream economics in the late 20th century. Deirdre McCloskey, who is not only a prominent methodologist but is a former officer of the American Economic Association, wrote in 1996 that mainstream economic methodology has devolved into largely "sandbox games."[39] She attacked its confusion of "statistical significance" with "scientific significance" and its reliance on "blackboard proofs," both of which render its findings as being totally inappropriate for application to real world policy making.

"[Malthus' work represented] the first thorough application of the inductive method to social science."
— Alfred Marshall

Two decades earlier, Robert Gordon, in his presidential address to the same American Economic Association, strongly criticized the trend in contemporary economics to believe that the relevancy of a happening depends primarily on its consistency with current economic theory.[40] As Gordon made clear, the real test for a discipline that seeks to be a science is *not* whether its propositions are logically true and tautologically deductible from earlier assumptions but whether its propositions correspond to reality.[41] In chastising the modern economics profession for its predilection for "rigor regardless of relevance," Gordon concluded by stating: "And let us not be afraid to ask — and try to answer — the really big questions."[42]

To his credit, Malthus pioneered the use of inductive processes for the study of economic issues and even his most severe critics must acknowledge that he addressed "really big questions."

Assessment

There is no debate over the influential role that Malthus played in the founding of the field of economics. Not only did he hold the first academic chair in political economy in Britain, he has also been described by Mitchell as being "the first professional economist" in the country.[43] Mitchell claims that the mantle rightly belongs to Malthus, rather than to his far more famous predecessor Adam Smith, because, when Smith lived, economics was considered to be only a branch of moral philosophy and, two years after publishing *The Wealth of Nations*, Smith quit academia to become a public official for the remainder of his life. Malthus, in contrast, became an academician shortly after the publication of the second version of the *Essay* and he continued in that vocation, teaching and writing on a variety of economic issues, until his death.

Likewise, there is little debate about Malthus's predilection for inductive reasoning. Keynes described Malthus as being "the inductive and intuitive investigator who hated to stray too far from what he could test by reference to the facts and his own intuition."[44]

Thus, it is the conceptual aspect of his life's work pertaining to the study of population that symbolizes the paradox of his reputation. The irony has best been captured by the famed economic philosopher, Kenneth Boulding. He has written of Malthus, that "he was a great and insightful economist," but "he really knew very little about the theory of population and he made no valuable or original contributions to it;" nevertheless, "one thinks of Malthus and population in the same breath."

For all of his writings about population, Malthus showed scant interest in the demographic factors that actually determine population growth.[46] There

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

is no discussion of the age and gender distribution of the population, especially the proportion of the population who are women of childbearing age. Such fertility factors, of course, have substantial influences on the actual growth capacity of a population at any given time. There is little discussion of the time lags necessary for population tendencies to respond to changes in the means of providing subsistence. Likewise, there is no apparent recognition of the demographic link between the birth rate and the death rate as the critical determinant of the population growth of a nation.

During his life time, it was the simplicity of the idea he discussed that explained his immediate appeal. There is, after all, no dispute that every living thing will multiply in a geometrical progression up to the limits of its food supply. Therefore, any such population growth rate could not be sustained indefinitely. Thus, while the logic of his proposition cannot be refuted, neither can it be verified since unchecked population growth does not exist in the real world. Furthermore, as modified by the second *Essay*, rising living standards in a country could only mean that the country is practicing "moral restraint;" falling living standards, in turn, would prove the absence of such "restraints" with the result being that the populace has been exposed to misery and vice. But this means that the proposition can be applied to any actual or conceivable population trend. Accordingly, Blaug concludes that "a theory that is not falsifiable by any conceivable event is a tautology masquerading as a theory."[47]

As for the use of the law of diminishing returns, Malthus certainly deserves kudos for being a co-founder of one of the most important principles of economic analysis. Nonetheless, his actual use of the concept in his population theory is subject to criticism.[48] The law itself is a static proposition concerning the returns sustained by adding a variable factor to a fixed factor under *a given state of technology*. But, there is no law of diminishing returns to technological progress. Thus, one of the most frequent charges against Malthus is his theory's failure to recognize the dynamic nature of a growing population dependent on a given amount of land under conditions of *constantly improving technology*. The United States, for example, has less than half the land in agriculture in the 1990s than it did in the 1920s, but it produces far more food now than it did then due to enormous increases in agricultural productivity that have taken place over in the interval.

Nevertheless, if there ever can be said to be such a thing as a consensus among economists concerning the lasting contribution of Malthus, it would be that the population law he posited remains firmly intact, but the conclusions he drew from it have proven to be unwarranted. The tendency of human beings to multiply would, if unchecked, soon exceed the limits imposed by available space to sustain them. However, in his discussion of human conduct, Malthus seems to have confused the sexual and reproductive instincts.[49] They are not the same. Only sexual instincts can be attributed the character of "irresistibility." Reproductive instincts can be modi

"...one can expect substantial pressure for more emigration out of the less developed nations and immigration into the industrialized countries."

social, political, and religious views — that vary with time and place. The growing acceptance of family planning practices in the industrial world in the 20th century has provided a means to separate the two basic instincts, thereby tempering the inevitability of the Malthusian prediction. Moreover, in economics "the Malthusian view that famines act as a check on population growth has been discredited."[50] Given that food in this modern era is generally available elsewhere, the actual outbreak of a famine in one nation or region with its attendant human suffering is attributed to institutional failure of the governments of other nations to respond to the needs of an inflicted state, not to the inevitable operation of Malthusian laws.[51]

Yet the fact remains that for many non-industrialized nations, they have retained the high birth rates associated with their agrarian economies while also experiencing the declining death rates associated with the industrialized nations. The

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

consequence being that many of the former are experiencing dramatic population growth. The United Nations Population Fund has reported that 93 percent of the world's population growth in 1990 occurred in these less-developed nations and it projected that 95 percent of the annual population growth would occur in these nations by the year 2000.[52] Such growth exerts a negative influence on efforts to stimulate economic development. Often rapid population growth is the source of political turmoil and violence in these countries because it is linked to problems related to health, housing, education, nutrition and land use.

The assumption in economics is that technology will continue to expand worldwide food supplies and that, eventually, the non-industrialized countries will become less agriculturally dominated and begin to reduce their birth rates as the pecuniary cost of children becomes more obvious. In the short run, however, soaring population growth in the less developed nations means that there will be more political pressure on the "have countries" to help the "have nots" and that one can expect substantial pressure for more emigration out of the less developed nations and immigration into the industrialized countries.[53] Yet, unlike earlier eras when there existed sizable unoccupied areas around the globe and when some industrialized countries were willing to be generous in providing accommodation to ease the overpopulation pressure of the less developed world, there are no unoccupied regions anymore that are not claimed by some country and most, if not all of the industrial countries, claim to be under financial stress.[54] Hence, the U.N. Population Fund has already warned that the rapidly emerging confrontation between the urge to migrate by millions of people in the less developed nations and the mounting resistance to their efforts by the more developed nations means that immigration promises to become "the human crisis of our age."[55]

Unfortunately, having largely dismissed the pioneering work of Malthus, the economics profession in the 20th century has largely abandoned the field of population studies. Thus, as the issue of overpopulation has emerged in the less economically developed world, economists have had little of value to say other than to simply conclude that the issue should be left to the market to settle and international assistance agencies to confront. The simplicity of this homily with its harsh adjustment consequences, however, neglects the entire issue of the quality of life in all countries which are faced with limitational factors — now or in the near future. It also places economists on a collision course with environmentalists who worry that worldwide population growth is leading to resource depletion, pollution, loss of biodiversity, urban congestion, and global warming.[56]

Thus, it is unfortunate that the legacy of Malthus has been diminished in the field of economics. For his message is of vital consequence: human beings ought to use their intelligence — not dogma — to prevent suffering and to improve the well-being of all people. It is the only real hope there is for long run human survival. As Bonar expressed it:

> *But all can enter the mind of Malthus and understand his work who knew the hardness of the struggle between the flesh and the spirit, and yet believe in the power of ideas to change the lives of men, and have faith not only in the rigors of natural laws but in man's power to conquer nature by obeying her.*[57] TSC

NOTES

[1] Robert L. Heilbroner. *The Worldly Philosophers. (New York: Simon and Schuster, 1953), p.3.*

[2] *ibid.*

[3] John Maynard Keynes. "Robert Malthus: The First of the Cambridge Economists." *Essays in Biography.* (New York: Harcourt, Brace and Company, 1933), p.106.

[4] Warren J. Samuels. *The Classical Theory of Economic Policy.* (Cleveland: The World Publishing Company, 1966), p.4.

[5] John N. Ferguson. *Landmarks of Economic Thought.* (New York: Longmans, Green and Co., 1938), p.96.

[6] *ibid.* P.92.

[7] For a sample of the tenor and substance of the correspondence between Malthus and Ricardo, see Richard T. Gill. *Great Debates in Economics,* Volume 1, (Pacific Palisades, CA: Goodyear Publishing Company, Inc., 1976), pp.8-28. For the complete exchange see Piero Straffa. *The Works and Correspondence of David Ricardo.* Volumes i-ix, (New York: Cambridge University Press, 1951).

[8] Keynes, *op. Cit.,* p.148.

[9] David Ricardo. *The Principles of Political Economy and Txation.* (London: J.M. Dent & Sons, Ltd., 1960), Chapters II, V, VI, XXII and XXIII.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

[10] T.R. Malthus. *Principles of Political Economy.* (New York: Augustus Kelley, Inc., 1951), Chapter III.

[11] Charles Gide and Charles Rist. *A History of Economic Doctrines.* (Boston: D.C. Heath and Company, 1913), pp.142 and 145-6.

[12] Samuel Hollander. *The Economics of Thomas Robert Malthus.* (Toronto: University of Toronto Press, 1997), pp.809-819. [Hollander contended that in the later years of his life, Malthus' views were changing from agricultural protectionism to free trade and balanced growth between agriculture and industry. See pp.846-865.]

[13] *ibid.*, p.164.

[14] Wesley C. Mitchell. *Types of Economics.* Volume 1, (New York: Augustus M. Kelley Publisher, 1967), p.235.

[15] Thomas Robert Malthus. *An Essay on the Principle of Population.* (New York: W.W. Norton & Company, 1976), p.19.

[16] *ibid.*, p.20.

[17] *ibid.*, pp.20, 22.

[18] Mitchell, *op. cit..*, p.242.

[19] *ibid.*, p.243.

[20] Ronald W. Clark. *The Survival of Species, Charles Darwin: A Biography of a Man and an Idea.* (New York: Random House, 1984), pp.53-55. Darwin first read the *Essay* in September, 1838, but he did not publish his famous *Origin of Species* until 21 tears later in 1859.

[21] James Bonar. *Malthus and His Work.* (London: Frank Cass & Co., Ltd., 1966), p.5.

[22] Indeed, there is research that supports this conclusion. See George R. Boyer, "Malthus Was Right After All: Poor Relief and Birth Rates in Southeastern England," *Journal of Political Economy* (February, 1989), pp.93-114.

[23] Bonar, *op. cit.*, p.2.

[24] Mitchell, *op. cit.*, p.255.

[25] Bonar, *op. cit.*, p.54.

[26] Keynes, *op. cit.*, p.119.

[27] Bonar, *op. cit.*, p.5.

[28] Mitchell, *op. cit.*, pp.14, 60-67, 99-100.

[29] *ibid.*, Chapter 5. (See especially pp.327-330.)

[30] *ibid.*, p.328.

[31] Hollander, *op. cit.*, pp.951-969. In fact, he contends that Malthus was essentially a deductive theorist and he downplays the views held by most other scholars that Malthus relied mostly on inductive methodology.

[32] T. R. Malthus, *op. cit.*, p.1.

[33] *ibid.*

[34] *ibid.*

[35] Mitchell, *op. cit.*, p.1.

[36] M. Blaug. *Economic Theory in Retrospect.* (Homewood, IL: Richard D. Irwin, Inc., 1962), p.65.

[37] Keynes, *op. cit.*, p.144.

[38] Blaug, *op. cit.*, p.159.

[39] Deirdre McCloskey. *The Vices of Economists — The Virtues of the Bourgeoisie. (Amsterdam: Amsterdam University Press, 1996).*

[40] Robert A. Gordon. "Rigor and Relevance in a Changing Institutional Setting." *American Economic Review* (March, 1976), pp.1-14.

[41] *ibid.*, p.1.

[42] *ibid.*, p.14.

[43] Mitchell, *op. cit.*, p.258.

[44] Keynes, *op. cit.*, p.135.

[45] Kenneth E. Boulding. "Foreword," *The First Essay by T.R. Malthus.* (Ann Arbor: The University of Michigan Press, 1959), p. v.

[46] Blaug, *op. cit.*, p.67.

[47] *ibid.*, p.65.

[48] *ibid.*, p.64.

[49] Gide and Rist, *op. cit.*, p.132.

[50] Martin Ravallion. "Famines and Economics," *Journal of Economic Literature* (September, 1997), p.1207 (see footnote 3 of this article).

[51] *ibid.*, pp.1205-1207.

[52] United Nations Population Fund, *The State of the World Population:1993.* (New York: United Nations Population Fund, 1993), p.1.

[53] Ravallion, *op. cit.*, pp.1236-1237.

[54] Bimal Ghosh, "Economic Migration and the Sending Countries," *The Economics of Labour Migration.* Edited by Julian van den Broeck (Cheltenham: Edward Elgar, 1996), pp.77-114; and Vernon M. Briggs, Jr. "International Migration and Labor Mobility: The Receiving Countries," *ibid.*, pp.115-158.

[55] United Nations Population Fund, *op. cit.*, p.15.

[56] E.G., see Herman E. Daly and John B. Cobb. *For the Common Good: Redirecting the Economy Toward Community, the Environment and a Sustainable Future.* (Boston: Beacon Press, 1990); John M. Culbertson. "Economic Growth, Population and the Environment," *Population and Environment.* (Winter, 1989), pp.83-100; and Digby J. McLaren. "Population Growth — Should We Be Worried?" *Population and Environment.* (January, 1996), pp.243-259.

[57] Bonar, *op. cit.*, p.398.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Thomas Malthus and Australian Thought

by Sheila Newman

Contemporary documents indicate that Malthus's economic and demographic views impacted strongly on Australian culture from an early time and were reinforced later by Darwin's theories. When academic poli-tical economists abandoned the Malthusian principles of economic protectionism and demographic prudence,[1] these nevertheless continued to underpin the world view of much of the Australian scientific (natural sciences) community as well as popular political and economic sentiment. A reason for this was that, whereas mainstream "Western" economic thought diverged markedly away from Malthus, via Ricardo, mainstream scientific evolutionary discussion continued to build on his distinctively organic ideas, via Darwin.[2] The disciplines of economic and natural science have since continued to have less and less to say to each other. These trends were not peculiar to Australia, but this historic record suggests that, while the natural sciences' view on population dynamics was partly eclipsed by that of economics, it has retained greater dominance in Australia than in comparable countries.

> It is a little known fact that the especially low density of Australia's aboriginal people inspired Malthus's first essay on population.

Cook's expedition to Australia prior to settlement was truly scientific and the continent subsequently became a hub of scientific research and activity. Largely due to the protection geographic isolation afforded, Australia was able to develop distinctive cultural, economic and political streams and the "natural sciences" perspective has survived to feature prominently in Australian population policy discussion at national enquiry level, whereas, in Europe and the U.S. this discussion is dominated by socio-economic and ethno-cultural paradigms.

The Malthusian scientific view dovetailed with Australian agricultural thinking, for Malthus's economic writing complemented his demographic theory and appealed to agriculturalists. In his essay, *Grounds for an Opinion on the Policy of Restricting the Importation of Foreign Corn,* Malthus made the point strongly that it was only where rent was high, that is where profits were considerable on agricultural products, that agriculture would expand into marginal lands. Where profit was low, the cost of extending agriculture was too high and farmers tended to restrict production to the most high-yielding areas of their properties. Malthus thought that achieving high profits required a degree of protectionism and he also endorsed limited national self sufficiency, with government able to oversee the security of the production of staples.[3] His policies would have suited early Australian settlers in an economy where Malthus's protectionist theories lacked the opposition provided in England by a strong industrial manufacturing sector. In fact protectionism dominated Australian agricultural and foreign policy from early times, and, until the 1980s or thereabouts, provided rare common ground for both labor and capital.

The importance of Malthus' economic and demographic views is strongly indicated by the extraordinary number of early editions of Malthus's *Essay on the Principle of Population* (1798) in Australian

***Sheila Newman** is a post-graduate research student in environmental sociology at Swinburn University, Melbourne, Australia. She is writing a major thesis on First World population policies, comparing France and Australia. She is also president of the Victorian Branch of Australians for an Ecologically Sustainable Population. She edits a number of internet pages on population matters at www.vicnet.net.au/~aespop/welcome.*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

libraries as well as many copies of his seminal essays: *Grounds for an Opinion on the Policy of Restricting the Importation of Foreign Corn* (1815) and *An Enquiry into the Nature and Progress of Rent* (1815). Evidence for the ongoing development of the Malthusian perspective in the nineteenth century is further provided by the profusion of works by John Stuart Mill,[4] Herbert Spencer and Charles Darwin, available in both public and private libraries.[5]

Malthusian Foundations of Early Settlement in Australia

> *In addition to the omnipresent problem of poverty, a bothersome question worried England throughout most of the eighteenth century: the question of how many Englishmen there were.*[6]

Population growth in England had caused the demand for grain to exceed supply and the price of a bushel of wheat quadrupled. Between 1790 and 1813 profits on medium sized farms rose from 88 to 160 English pounds.[7]

Many crimes were committed out of dire poverty, to get food, clothing or fuel. There were 160 crimes punishable by hanging and many others punishable by transportation to penal colonies overseas. Due to technological change many people had lost their way of earning a living and the enclosure of farmland prevented them from running animals on the commons. Rural drift to the cities compounded the overcrowding and desperation there.[8] The jails were overcrowded in 18th century England and after the Declaration of Independence in 1776, America rejected prison ships. Malthus later described the Irish population as outstripping both agricultural production and capital[9] and by 1801, the Irish formed one third of the convict population in Australia.[10]

In 1770, under the auspices of the Royal [scientific] Society of England, Captain James Cook sailed to Tahiti officially to observe the transit of Venus, but also to spy out new land. While searching for Van Diemen's Land (now an island State of Australia called Tasmania), Cook's vessel was blown off course and he and the scientists accompanying him, one of whom was Joseph Banks, the botanist, landed at Botany Bay, on the South East coast of Australia. There they stayed for eight days. Joseph Banks was able to observe many strange new plants and animals and, a man of his times, wrote several paragraphs wondering at the low density of the Aboriginal peoples.

> *Whatever may be the reason of this want of People is dificult [sic] to guess, unless perhaps the Barreness of the Soil and scarcity of fresh water; but why mankind should not increase here as fast as in other places...*[11]

Malthus reveals in his second essay on population that Banks' remarks were the ***cause*** of his first famous "Essay on the Principle of Population," but he confuses Banks with Cook:

> *A view of these checks, in most of the countries of which we have the best accounts, was taken in the [first] Essay on Population [Malthus, 1798]. The object was to trace, in each country, those checks which appeared to be most effective in repressing population; and to endeavor to answer the question, generally, which had been applied, particularly, to New Holland [Australia] by Captain Cook, [sic] namely, "By what means is the population of this country kept down to the number which it can subsist?"*[12]

It was Joseph Banks, the botanist, who proposed that the British government might relieve the overcrowding of its prisons by sending convicts to New South Wales, the South East tip of Australia.

European Colonization, 1788

From 1788, the date of the first settlement by Europeans in New South Wales, the survival of the colony was in doubt. The climate was hostile, unknown and unpredictable. The seasons were the reverse of those in the northern hemisphere and they were overshadowed by the stronger ten-year El Niño cycle of "droughts and flooding rains."[13] Water was scarce and the soils were sparse and lacking in nitrogen, phosphorus and trace elements. Moreover the first settlers — convicts and soldiers — knew nothing of agriculture and had not been adequately provided with essential tools for survival, such as hoes, axes, fishing lines and hooks. The misery of the early years of settlement was not lightened by the frequent floggings, solitary confinements and executions, some of which were punishments for stealing food.[14]

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Captain-Lieutenant Watkin Tench, who was there, records in 1790:

> *Famine besides was approaching with gigantic strides, and gloom and dejection overspread every countenance. Men abandoned themselves to the most desponding reflections and adopted the most extravagant conjectures.*[15]

"...specimen collections from Australia's peculiar ecology caused a [new] focus for evolutionary theory. Darwin visited in 1836."

The situation degenerated into black Malthusian comedy, as the settlers sought to disguise their plight from Baneelon, an Aboriginal they had captured for anthropological study. They feared that if Baneelon escaped he would alert his tribesmen to their weakened condition and the Aborigines would finish them off. Tench recorded that their rations for a week were insufficient to keep Baneelon for a day and the starving settlers felt obliged to hunt and fish for extra, entirely on his behalf. Nevertheless Baneelon became increasingly unhappy and managed to escape.[16]

Settlement of other parts of Australia was no less fraught with difficulties, especially in expanding agriculturally productive territory. What was to become the second most populous State, Victoria, adjacent to the State of New South Wales, proved inaccessible by land for a very long time, due to the intervening uncharted and extensive Blue Mountains. The capital city of Melbourne was not established until 1836 and Victoria did not become separate from New South Wales until 1851. This was the same year as the beginning of the gold rush, which accelerated economic development and demographic growth. Exploration was really only completed around 1865, by which time Australians had basic information about the resources and limitations of the continent.

Immigration schemes sponsoring cheap or indentured labor eventually replaced convict labor and, between 1830 and 1850, about 125,000 immigrants arrived in New South Wales and Victoria, and another 60,000 in West Australia and South Australia. Settlers found land so infertile that many had to release their indentured laborers because they were unable to feed them. Ladies and gentlemen were obliged to scavenge from their fields with their own hands.[17] Between 1851 and 1857, 400,000 migrants poured in from Great Britain and Europe and Asia, including 40,000 Chinese and many poor Irish, the latter fleeing the famine conditions and typhoid that the great potato blight had brought.

Banks and Cook's discoveries and subsequent explorations and specimen collections from Australia's peculiar ecology had caused a furor and Australia became a focus for evolutionary theory. Charles Darwin visited in 1836.

Darwin wrote of Australia's great biophysical disadvantages, making shrewd observations on soil, vegetation, and climate. Coal deposits might provide Australia with energy for manufactures and transport, he wrote, but regarding Australia's future prospects, he concluded:

> *I formerly imagined that Australia would rise to be as grand and powerful a country as North America, but now it appears to me that such future grandeur is rather problematical.*

Both Alfred Russell Wallace and Charles Darwin, co-founders of the theory of evolution, were deeply impressed by Malthus' works. Not only did they evolve virtually identical theories quite separately, but each made the extraordinary claim that Malthus' essay on population had been ***the*** inspiration that had caused the sudden synthesis of the main thesis.[19] They presented a joint paper in 1858 at the Linnean Society in England.

In 1859 Darwin's *Origin of Species* was published. Not surprisingly it was a big hit in Australia, as the numerous copies available in public libraries of the time attest.[20]

Professor W.E. Hearn and Biological Economics

Professor Hearn was made the first professor of political economy at Melbourne University (Victoria) at a time (1854) when there were only two universities in Australia. He was the author of *Plutology, or the Theory of the Effort to Satisfy Human Wants*, 1863.[21] This textbook, built upon his economics lectures, was used by students for sixty

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

years — until 1924. It was based on a biological view of economics, referring copiously to Darwinian ecology and Malthusian economics. Although Hearn believed that population growth was a factor of considerable importance which would ultimately prove problematic — "like all other organisms, the social organism is subject to fixed conditions and limits of growth"[22] — he came down on the side that having lots of people was a good thing for production in the meantime.[23] He also favored free trade, earning the opprobrium of the governor of Victoria, who refused to fund the chair on the grounds that free trade was strongly out of line with Australian opinion.[24]

But despite Hearn's optimistic views on Malthusian demographics and his academically fashionable free market attitudes, he appears to have been one of the last Australian academic economic theorists to have married economics with the natural world. In fact, the post-Second World War economic historian, J. A. La Nauze, identified him as the father of a kind of "biological economics." That La Nauze obviously found Hearn's manner of interpreting all things through organic glasses infuriatingly old fashioned and vaguely repulsive lends weight to the respect he grudgingly accorded Hearn. He crediting him with a first in the area of systematic Darwinian economics, describing him as having created, "... the first book in English (and I think in any language) systematically to apply the Darwinian theory of organic evolution to political economy, and to insist that the proper method for the study of economic society was biological."

La Nauze's contempt[26] in 1948 regarding Malthus, Darwin and associated biological determinists and economic and philosophical theorists, is also suggestive of some massive battle going on among the academics of political economy from the 1850s and well into the 20th century. His detailed analysis[27] of Hearn's approach to social problems in *Plutology* gives more indications of the pervasive influence of Malthus, Darwin, and Mill in Australia in Hearn's time and as subjects for discussion at Melbourne University.

La Nauze comments that "evolutionary ideas were in the air" in Hearn's time, but summarizes that "[i]t is in the application of *biological* concepts of evolution to political economy that Hearn's originality lies. He argues in some detail that J.S.Mill, Henry Fawcett, and Cairnes, who were Hearn's English contemporaries, never synthesized anything like Hearn's biological economics."[28]

Hearn dominated a school of political economic thought in Melbourne, as a writer for the conservative *Argus* newspaper, as a member of parliament from 1873, and for at least the sixty years his book survived as the main economics text at the only university in that State. Here was a solid bridge for the continuation of the stream of Australian organic evolutionary thinking from the nineteenth century well into the twentieth. No other Australian economic texts were published in Melbourne for sixty years after *Plutology*.

"T. G. Taylor argued that Australia could never support more than 65 million people... He later amended this to 20 million..."

Coincidentally, or perhaps inevitably, in 1922 a charismatic geographer and adventurer stepped in just as Hearn's book was being removed from the syllabus and replaced with something more modern and less biological. The geographer's name was Thomas Griffith Taylor, and his students still talk of him.[29] Taylor (1880-1963) argued that Australia could never support more than 65 million people due to its biophysical limitations. He later amended this to 20 million, assuming much higher per capita living standards. Not only does Taylor seem to have been the first to publish the connection between population numbers and affluence (consumption) against the background of local biophysical characteristics and constraints, but he eerily predicted the likely population of Australia as no more than 20 million in the year 2000.[30] Until Taylor left Australia six years later (for North America[31]) there was heated debate about Australia's population capacity.[32] His work gave rise to, or consolidated, a popular Australian social movement rooted in biophysical science and kept Malthusian and Darwinian thought strong among Australia's natural scientists, although geography has since tended to

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

fuse its ideas with anti-Malthusian economics.

Griffith Taylor's work also embodied the then widely fashionable eugenicist point of view that has also been described as "Social Darwinism" because of its concepts of human evolutionary hierachies. Although he advocated allowing Chinese to migrate to Australia (in moderate numbers), he felt that "negroes" should not be admitted. Today of course both these ideas are considered morally repugnant, politically dangerous and beyond the bounds of civilized discussion. In Taylor's day they were rejected on similar grounds, but from a quite opposite perspective. It was Taylor's recommendation that Australia should allow Chinese migration, and his advocacy of mixed marriages between Chinese and European, that led to the ultimate rejection of his ideas at the level of policy makers and of his person at the level of the Press.[33]

After WW II eugenics was dropped like a hot potato. Women's rights to birth control slowly came to the fore in Australian population policy debate.

It was not until 1968 [a date coinciding with the release of Ehrlich's *Population Explosion*], that Australia's huge post-War immigration program began to be questioned in the light of its contribution to population growth and environmental impact.

Subsequently, between 1975 and 1994, there were seven national enquiries and reports which purported to or actually did examine the population question within the scientific context of environmental impact. Five were *The National Population Enquiry (Borrie Report) 1975,* which paid lip service only, *The National Population Council Report* 1992, which recommended a population policy; between 1990 and 1992, *The National Greenhouse Response Strategy* and *The National Strategy for Ecologically Sustainable Development,* which identified nine elements of a population policy consistent with ecologically sustainable development;[34] and *The Ahrlburg Report 1994,* on the foreign aid implications of the economic impact of unrestricted population growth.

The Australian movement, *Australians for an Ecologically Sustainable Population,* which has a scientifically-based philosophy, was formed in 1988. In 1994 an Australian Academy of Science symposium recommended early population stabilization on ecological, economic and quality of life grounds. The Australian scientific research center, CSIRO, began the "Ecumene project," an internationally-linked population modeling and projection study using environmental and economic data. In that same year Tim Flannery published his Australian best seller, *The Future Eaters,*[35] a scientific work on the ecological and economic evolution of Oceanic countries, which advocates a long term goal for Australia of between six and twelve million people.

Also in 1994 the *Australian Population "Carrying Capacity" Report,*[36] (the "Jones Report"), was published. More than 90 percent of submissions, including those from Aboriginal organizations, argued against population growth. The enquiry's inspired recommendation was to separate political and administrative responsibility for population and immigration (to avoid contamination with racial issues). Immigration intake should become an *instrument* of population policy, rather than population policy a "long term side effect of *ad hoc* immigration policy."

The (then) Labor government, with Senator Bolkus heading immigration and ethnic affairs (who had promised the ethnic vote to the Prime Minister of the day, by favoring family reunion and a high migration program), could not deal with the "Jones" report. The Chairman of the Enquiry, Barry Jones, was also the national president of the Labor Party. All hell threatened to break loose if the matter was put to parliamentary debate. An election was imminent. In the interests of Labor's return to power it was decided to keep a lid on the issues for fear of losing the ethnic vote. Jones expressed his opinion that the environmental vote would easily compensate for the ethnic vote, but failed to convince the Prime Minister.

In September 1995 the Government published its response to the 1994 United Nations International Conference on Population and Development. This reactionary document was the work of the Department of Immigration and Ethnic Affairs. It was also the Labor government's only reference to the matter of national population policy, which it rejected as too controversial. Other issues raised at Cairo were dealt with in a superficial manner and with only token reference to the environmental connection.

In March 1996 the Labor government was

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

resoundingly voted out of power. In defeat the Labor Party has developed a population policy. But the battle is by no means over yet. TSC

[Author Sheila Newman welcomes academic and political correspondence. Tel. (613)97835047, email: smnaesp@alphalink.com.au, Postal: PO Box 1173, Frankston, Australia 3199.]

NOTES

[1] "If only Malthus, instead of Ricardo, had been the parent stem from which nineteenth-century economics proceeded, what a wiser and richer place the world would be today!" John Maynard Keynes, *Essays in Biography*, London: Macmillan & Co., 1933, p.120.

[2] For instance, Richard Dawkins, Jarrod Diamond, Tim Flannery, the Leakeys, etc.

[3] Thomas Malthus, *The Grounds for an Opinion on the Policy of Restricting the Importation of Foreign Corn*, London: John Murray, 1815; and Thomas Malthus, *An Inquiry into the Nature and Progress of Rent*, London: John Murray, 1815, republished in *Pickering Masters: The Works of Thomas Robert Malthus: Essays in Political Economy*, London: William Pickering, 1986, Vol. 7.

[4] For Mill's population concerns (which his father shared) see J.S.Mill, *Principles of Political Economy*, ed. Ashley, book II, ch.xi, 1848.

[5] Neville Hicks, *'This Sin and Scandal', Australia's Population Debate 1891-1911*, ANU Press, 1978, pp.95-96.

[6] Robert Heilbroner, *The Worldly Philosophers*, Penguin Books, 6th Ed., p.75.

[7] Robert Heilbroner, *op.cit.*, pp.79-80.

[8] C.H.Wright, *Conquering the Continent*, Cheshire, Melbourne, p.12.

[9] Thomas Malthus, *Grounds for an Opinion on the Importation of Foreign Corn*, [Pickering Masters ed.], p.163.

[10] Grimshaw, Lake, McGrath, Quartly, *Creating a Nation, McPhee Gribble*, 1994, p.46.

[11] Joseph Banks, *Endeavor Journal*, 1768-1771, "August", p.123, Ed. J.C.Beaglehole, Angus and Robertson, Sydney, 1962, August.

[12] Thomas Malthus, *An Essay on the Principle of Population and a Summary View of the Principle of Population*, the second essay, entitled, *Summary View of the Principle of Population*, Penguin Classics, Penguin Books, London, 1985, p.251.

[13] Line from the second verse of a famous poem by Dorothea Mckellar, "My Country," revised and published in her first book, *The Closed Door*, 1911.

[14] Watkin Tench, *1788, Comprising a Narrative of the Expedition to Botany Bay and A Complete Account of the Settlement at Port Jackson*, first published in 1789; this edition edited by Tim Flannery, Text Publishing Company, Melbourne, 1996, p.102.

[15] Watkin Tench, *op.cit.*, p.119.

[16] Watkin Tench, *op.cit.*, pp.125-6.

[17] Grimshaw, Lake McGrath and Quartly, *op.cit.*, pp.79-81.

[18] Tim Flannery, *The Future Eaters*, Reed Books, 1994, citing Darwin, C.: *The Voyage of the Beagle*, 1845; republication by Edito-Service, S.A., Geneva.

[19] Encyclopedia Britannica, ed.1960, vol.23, p.302; and *The Wonders of Life on Earth*, Ed. Life Editors and Lincoln Barnett, Time Inc., New York, 1960, introduction by Sir Julian Huxley.

[20] Neville Hicks, *This Sin and Scandal*, pp.95-96.

[21] W.E.Hearn, *Plutology or the Theory of the Effort to Satisfy Human Wants*, G. Robertson, Melbourne, 1863.

[22] La Nauze, *Political Economy in Australia*, MUP, 1949, p.60, citing Hearn's *Plutology, p.10.*

[23] W.E.Hearn, *op.cit.*, p.394.

[24] La Nauze, *Political Economy in Australia*, MUP, 1949, p.20, note 16, citing E.Scott, *A History of the University of Melbourne*, Melbourne, 1936, pp.204-6.

[25] La Nauze, *op.cit.*, pp.204-6.

[26] La Nauze, *op.cit., passim.*

[27] La Nauze, *op.cit.*, pp.59-65.

[28] *Ibid.*

[29] Personal observation in the Australian population policy movement and J.M.Powell, *Griffith Taylor, Australia Unlimited*, UQP, 1992.

[30] T.G.Taylor, 1922, "The Distribution of Future White Settlement," *Geographic Review*, 10[12]:375-402 and T.G. Taylor, 1937, *Environment, Race and Migration*, Toronto UP, Toronto.

[31] I would be most interested to hear from anyone if he gave rise to any similar movements there.

[32] *Australian Population "Carrying Capacity Report" — One Nation, Two Ecologies*, AGP, 1994, p.8. Chaired by Senator Barry Jones, and known herein as the "Jones Report."

[33] J.M.Powell, *Griffith Taylor and Australia Unlimited*, pp.29-30.

[34] "*Jones Report*," *op.cit.*, p.12.

[35] Tim Flannery, *The Future Eaters*, Reed Books, 1994. Incidentally, Flannery will occupy the Chair of Australian Studies at Harvard University in 1998.

[36] "*Jones Report*," *op.cit.*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Malthusian Population Policies and the Growth of Social Science

by Antony Flew

This is neither the time nor the place for a detailed critical examination of the ideas of Malthus about population. In any case, I have myself made such an examination earlier and elsewhere.[1] But a bicentennial celebration does provide an appropriate occasion to consider the contribution, both intended and unintended, of these ideas to the growth of the sciences.

Durkheim, in his essay on "Montesquieu and Rousseau, precursors of sociology," contended that the etiological myth of the inspired and revolutionary legislator had, more than anything else, been the greatest obstacle to the development of sociology. But the people who actually began to show that various fundamental social institutions were not, and indeed could not have been, the creative inventions of mythological culture heroes were not Montesquieu and Rousseau, but Rousseau's very close contemporary David Hume, along with Hume's younger friends Adam Smith and Adam Ferguson. Thus, Hume in *A Treatise of Human Nature,* first published in 1739-40, argued against the doctrine of an original social contract giving authority to the state. He insisted that recognitions of common interest can and often will lead to the regulation of conduct in ways which are not derived from prior contracts, and often could not have been:

> *Two men, who pull the oars of a boat, do it by an agreement or convention, tho' they have never given promises to each other. Nor is the rule concerning the stability of possession the less deriv'd from human conventions, that it arises gradually, and acquires force by a slow progression... In the like manner do gold and silver become the common measures of exchange.*[2]

Again, in 1776, in *An Inquiry into the Nature and Causes of the Wealth of Nations,* Adam Smith argued that:

> *The division of labour is not originally the effect of any human wisdom, which foresees and intends the general opulence to which it gives occasion. It is the necessary, though very slow and gradual consequence of a certain propensity in human nature which has in view no such extensive utility: the propensity to truck barter and exchange one thing with another.*[3]

The contribution of Malthus was to introduce, if not the first would-be explanatory scheme, then at least the first such scheme to win widespread attention and application.

Nine years earlier, Adam Ferguson, in *An Essay on the History of Civil Society,* had shown in case after case how "nations stumble upon establishments, which are indeed the result of human action but not the execution of human design."[4] This same seminal passage at once proceeds to enforce the point that — at any rate in default of sufficient independence evidence of their particular existence and achievements — there is no longer any need to postulate or to admit creative culture heroes in order to explain the origin of such establishments.

These great Scots must thus be recognized as the true founding fathers of social science. The

Antony Flew is Emeritus Professor of Philosophy, University of Reading. Among other books, Dr. Flew edited and wrote the foreword to Malthus, An Essay on the Principle of Population, *London: Penguin Books, 1970. His most recent book is* Darwinian Evolution *published by Transaction.*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

contribution of Malthus was to introduce, if not the first would-be explanatory theoretical scheme, then at least the first such scheme to win widespread attention and application. By this introduction Malthus did two things which were of enormous importance for the future development, not only of the social sciences, but also of social policies.

The first was — eventually and very much against his own initial inclinations — to draw attention to a fundamental difference between the social sciences and the natural: it is that the former study the doings of members of the peculiar kind of creatures who can and therefore cannot help but make choices. The second was, consistently from the beginning and as the main intended practical moral of all his social scientific work, to insist that any systematic provision for the relief of one particular naturally burdensome condition necessarily diminishes the incentives for individuals —if and when either thing is possible — to avoid falling into and/or to escape from that condition.

"...we shall need to recognize that at least two different desires are involved in the production of children — the sexual and the reproductive."

Put in this way, and put at this time, these truths may appear obvious. But obviousness actually is — what nowadays so many other things are falsely said to be — essentially relative. What is obscure at one time may become obvious later, and what is obvious to one person may at the same time be altogether obscure to another. That this is so can most relevantly be brought out by considering the development of the thought of Malthus from the *First Essay*, published in 1798, to the later *Second*.

In both works the conceptual scheme for understanding is modeled on classical mechanics, but with the Principle of Population taking the place of the First Law of Motion, and the various checks taking the place of the various countervailing forces which may prevent objects' actually moving continuously in a right (i.e., a straight line). In the *First Essay*, the idea of choice is to be found only as something implicit in the notion of vice. And the power of increase in human populations is treated unequivocally as a physical power, which cannot be limited or frustrated by any human action or restraint from action — rather than as a personal power.

In the physical sense, the only sense in which the word "power" can be applied to inanimate objects and to the non-human elements in inanimate nature, a power simply is a disposition to behave in such and such a way, given that such and such preconditions are satisfied. Thus, we might say that the bomb ("the nuclear device") dropped on Nagasaki possessed an explosive power equivalent to that of so many tons of TNT. In the latter case, the sense in which the word "power" is applied to people and only to people, a power is an ability at will either to do or to abstain from doing whatever it may be. Thus we might say that a fertile couple of opposite sexes has, if that is their wish, the power to start a baby.

By introducing into the *Second Essay* his notoriously narrow conception of Moral Restraint, Malthus took a substantial but still insufficient step toward recognizing that, in the context of the human as opposed to the non-human sciences,[5] the power behind the Principle of Population is a personal and not a physical power. Once this is fully appreciated we have to insist that, for the purpose of scientific understanding, we need a fundamental and value-neutral distinction between preventive checks — checks which prevent births — and positive checks — checks which are causes of death.[6]

If we are to use such a Malthusian conceptual scheme to understand why the populations of some of the healthiest, most prosperous and most long lived countries which have ever existed are presently set to begin a sharp decline, we shall need to recognize that at least two different desires are involved in the production of children — the sexual and the reproductive. Since the former is much stronger and more nearly universal than the latter, we ought not to be surprised to find in such countries, where affordable and effective contraception is universally available, that increases in population at first begin to slow down and then later are followed by more or less rapid declines.

If all this emphasis on the fact that we are

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

members of a kind of creature which can and therefore cannot but make choices seems too obvious to be worth saying, then we may, for instance, respond by pointing to the sort of reception often afforded to the overwhelming evidence of the far inferior parenting performance of lone-parent as opposed to two-parent families — evidence which certainly cannot be entirely or even mainly explained away by referring to the comparative poverty of one-parent families.[7] To some of us, facing this evidence, it seems obvious that, enormously difficult though it would be to achieve, it nevertheless ought to be a prime object of social policy to try to reduce both the numbers of such families and the proportion which they represent in the total of all families. Yet against this it is often objected that to try to formulate such a policy is to refuse to accept ineluctable realities: "It is like having a weather policy which instead of providing umbrellas tries to stop the rain from falling."[8] But, because the Principle of Population is a personal and not a physical power, it is not like that at all.

Misled by the analogy between Newton's First Law of Motion and his own Principle of Population, Malthus in the *First Essay* pays almost no attention to those differences between our species and all others which make it possible for us alone to have population policies.[9] But the title page of the *First Essay* describes it as "An Essay on the Principle of Population as it affects The Future Improvement of Society with remarks on the speculations of Mr. Godwin, M. Condorcet, and other writers." And in the Abstract to Chapter V we read: "The true cause why the immense sum collected in England for the poor does not better their condition"; and "The powerful tendency of the poor laws to defeat their own purpose."

These phrases must sound familiar to all those acquainted with the recent history of the tax-financed welfare systems in the United Kingdom and the United States. But writing as he was at a time when the standard of living in England was comparable with that in some Third World countries today, Malthus also offered arguments which sound very strange to us. Thus:

> *Suppose that by a subscription of the rich the eighteen pence a day which men earn now was made up to five shillings, it might be imagined, perhaps, that they would then be able to live comfortably and have a piece of meat every day for their dinners.*

But, he continues,

> *What would then be the consequence? The competition among the buyers in the market of meat would rapidly raise the price from sixpence or seven pence to two or three shillings in the pound, and the commodity would not be divided among many more than it is at present.*

But also, and repeatedly, Malthus here offers arguments which constitute examples of the operation of Charles Murray's Law of Unintended Rewards. This law, as originally formulated, states that "any social transfer increases the net value of being in the conditions that prompted the transfer."[10] Like the other established laws of economic analysis this constitutes a logically necessary truth. For, as Murray goes on to observe, if "a deficiency is observed – to little money, too little food, too little academic achievement – and a social transfer programme tries to fill the gap with a welfare payment (then) the programme, however unintentionally, must be constructed in such as way that it increases the net value of being in the condition that it seeks to change – either by increasing the rewards or by reducing the penalties."[11]

"Malthus ... pays almost no attention to those differences between our species and all others which make it possible for us alone to have population policies."

Perhaps the clearest of the examples of the operation of this law which Malthus provides in this same Chapter V is that of the "general complaint among master manufacturers that high wages ruin all their workmen." For

> *it is difficult to conceive that these men would not save a part of their high wages for the future support of their families, instead of spending it in drunkenness and dissipation, if they did not rely on parish assistance for support in the case of*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

accidents. And that the poor employed in manufactures consider this as a reason why they spend all the wages they earn and enjoy themselves while they can appears to be evident from the number of families that, upon the failure of any great manufactory, immediately fall upon the parish...

To this and all similar suggestions about the operation of Murray's Law the objection is often made that the people concerned do not in fact make such calculations before they do or fail to do whatever it is which puts them into conditions prompting social transfers. That is probably true. But to this objection the proper response is to insist that they would be much more likely to make appropriate calculations if they knew that there would not be such transfers.[12] TSC

NOTES

[1] In the Introduction to Thomas Malthus *An Essay on the Principle of Population* (London: Penguin Books, 1970).

[2] *Treatise*, III(ii)2,p490 in the standard OUP edition.

[3] I(ii),p25 in the standard OUP edition.

[4] Pp.122-123 in the edition by Duncan Forbes for the Edinburgh University Press.

[5] It is noteworthy that Darwin, who was of course primarily interested in non-human populations and their natural powers of increase, saw at once the crucial relevance of choice in humans and the lack of it in the brutes. He first saw this when he read what seems to have been the *Second Essay* in September 1838. But he put it most incisively when in *The Origin of Species* he wrote of the struggle for existence: "This is the doctrine of Malthus applied with manifold force to the whole animal and vegetable kingdom; for in this caes there can be no artificial increase of food and no prudential restraint from marriage." (p.117 in the Penguin Books edition).

[6] Malthus records in the *Second Essay* Jesuit warnings of historical disasters caused by population explosion in China. Claire and W.M.S. Russell have recently published in the *Galton Institute Newsletter* (Issues 18-25) a series of articles on "Population Crises and Population Cycles" not only in China but also in various areas in Europe, Asia and North Africa.

[7] Patricia Morgan, *Farewell to the Family? Public Policy and Family Breakdown in Britain and the USA* (London: Institute of Economic Affairs Health and Welfare unit, 1995), Ch 2.

[8] For the name of the professing social scientist who made this claim see Note 1 to the Chapter cited in note 7 above.

[9] See Note 5, above.

[10] *Losing Ground: American Social Policy 1950-1980* (New York: Basic Books, 1980), p.212.

[11] Ibid.pp.212-3:emphasis in orignal.

[12] As a final illustration of the relativity of obviousness we may notice that in presenting his proposals for a negative income tax (NIT) Milton Friedman — of all people — seems never to have considered the relevance to its introduction of the economists' general Law of Supply and Demand, of which Murray's Law is one special case. For, as we may learn from Murray (pp.148-153), it was in an attempt to meet the objection that the introduction of such a guaranteed income would cause people to reduce their work effort or to drop out of the labor force altogether that the Office of Economic Opportunity set up "the most ambitious social-science experiment in history." The result was totally decisive, demonstrating unequivocally

The Growing Use of E-mail

In this issue of THE SOCIAL CONTRACT we have given, as often as we knew it, the e-mail address of each author in the hope that our readers would communicate their responses to the articles, furthering the dialogue about population issues. Each writer would like very much to hear from you.

The several organizations which are active in the population field also have e-mail addresses which you will find useful for quick communication. Some of these are:

- <fair@fairus.org> The Federation for American Immigration Reform
- <center@cis.org> Center for Immigration Studies (CIS)
- <103527.3545@compuserve.com> Negative Population Growth (NPG)
- <ccn@igc.apc.org> Carrying Capacity Network (CCN)
- <caps@calweb.com> Californians for Population Stabilization (CAPS)
- THE SOCIAL CONTRACT's e-mail address is <soccon@freeway.net>.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Malthus in the Sky with Diamonds

Linear time has been called an illusion. In this fable it is also the author's indulgence.

by Diana Hull

Soon after his death and ascension, cleric Robert Malthus warned the angels in charge of life after life about the really huge number of souls heading toward heaven in the future. So instead of enjoying his "reward" and its wonderful blessings, Malthus despaired for the fate of an already congested firmament, and complained about mid-air collisions and how they were causing irreversible damage to gossamer.

The winged hosts ignored his bad news, were placid, and refused to be ruffled by criticism. In truth, Malthus hadn't been on their "short list" for admission to heaven anyway, because his closely reasoned arguments about the nature of benevolence were resented by some as unflattering to the church.

The charitable didn't want to be told that religion and government interfered too much with the price humans paid for sexual indulgence, especially at an early age — a message as unpopular with the angels above as it was with the sinners below. For frowning upon an excess of "fruitfulness" and the rescue of the impoverished fecund from their folly, Malthus suggested that a variety of well-intended deeds could be doing more harm, in the long run, than good.

For his unseemly predictions and restrictionist view of reproductive ethics, Malthus was ostracized in heaven by his own co-religionists, by Kings Solomon and Ahab, and by all the Josephs — from Arimathea through Joseph Smith and the Joseph Kennedys I, II and III — by Baptists, Quakers and Orthodox Jews, by Don Juan, by every expired Pope in residence, and by Maria Gonzales Gutierrez and her 78 grandchildren, who had nominated her for the "Santa Barbara Mother of the Year Award."

It was also Malthus' misfortune to be living on the same cloud with Brigham Young and a prior incarnation of Dr. Richard Seed. The Mormon leader and his 57 children never used tax money to provide for their issue, which they said gave them unlimited freedom to breed.

Dr. Seed planned to make human cloning a retirement imperative. Why be victimized by the genetic "dice," was his logical query, when you could buy cells to clone from Rupert Murdoch? With big time earners in the family, an IRA was moot, and who's to say you had to stop at two?

Malthus' effort to limit the supply of "human capital" threatened the inexhaustible power of an unhampered marketplace — a possibility that enraged the Libertarians, hypnotized by the prospects of free flight and desperate to escape the pull of earth's gravity. Also, any suggestion of curbs on population could freeze the ambitions of ethnic minorities, now winning the race toward majority status. For these reasons and more, antagonism to Malthus grew.

His opponents formed the Celestial Pro-Natalist Party under the auspices of the Chamber of Commerce of Carlisle, Iowa, hometown of septuplet mom Bobbie McCaughy. It was a stealth campaign, organized by Opus Dei and paid for by Cary's

Diana Hull, Ph.D. *is a behavioral scientist trained in demography and epidemiology. As a Clinical Associate Professor in the Department of Psychiatry at the Baylor College of Medicine in Houston she became interested in the health effects of immigration. Now residing in Santa Barbara, California, she is the co-founder and co-chair of the Santa Barbara County Immigration Reform Coalition. Comments may be addressed to her at: DianaHull@worldnet.att.net*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Pharmacy of Dobbs Ferry, New York, who shipped Pergonal, Follistim and Gonal (10 vials for $625) and four other fertility drugs by Airborne Express at a discount.

While waiting for their next incarnation, the pro-natalists, along with all the angels, endured a heaven that became even smoggier. Labored breathing paralleled reproduction on the "fast track" below, as God's country became a new site for market penetration by a Toronto chain of O_2 Bars. Soon the angels were seen clutching their bottled water from Calistoga in one hand, and their new nasal canulas in the other.

Anti-Malthusians argued that crowding encouraged migration to the planets and since the universe was ever-expanding, excess bodies and souls were needed to gentrify the abyss. Overpopulation would push innovation, they claimed, as humans redesigned themselves for long-term survival in space.

"[Malthus was returned] to what he thought was a scientifically advanced society where the wisdom of his assertions about population growth and the food supply would surely have been demonstrated already."

This entrepreneurial zest, the Libertarians said, would create opportunities without end, because there was room for hundreds of billions more people out there in the void. They were disdainful of Malthus, who didn't view people as the "ultimate resource."

The archangels were not materialistic, but were able to calculate the fuel-cost savings for new take-off locations much closer to heaven and how the demand for halos and scepters would surely increase It was their idea to hire physicist Freeman Dyson as a consultant, because he was certain that humans could learn to live on a comet.

If there wasn't indigenous life on Mars or Europa, Dyson said, earthlings could import seeds of warm-blooded plants and engineer animals fit to survive in an alien climate. Not to worry — by the end of the 21st century, Dyson assured them, humans would write DNA for trees that would grow into greenhouses big enough for people to live in.

Dyson recommended settlements in the Low Gravity Belt outside the orbit of Neptune. This ring-shaped region, he estimated, had an area a thousand times bigger than earth. No reason why it couldn't have cultural centers and advanced civilizations. Even planetary *lebensraum* was achievable, according to Dyson, by attaching tethers to neighboring land that was drifting by. And beyond Neptune there was a "still untamed area," Dyson explained, that physicists called the "Oort Cloud."

These possibilities were music to the ears of the heavenly pro-natalists, who planned for eternity and couldn't have gotten their advice from a more brilliant authority. His assurance that there was no limit to the benefits more people would bring, encouraged a class action lawsuit against Malthus led by heavenly branches of the Open Borders Foundation, and the ACLU. They said his recommendation of late marriage was illegal euthanasia for ova that hadn't signed a "don't resuscitate" document, and that his population concerns exposed him as a dangerous "anti angel-of-color" extremist.

The protracted litigation delayed Malthus' reincarnation for 200 years and caused him to return to what he thought was a scientifically advanced society where the wisdom of his assertions about population growth and the food supply would surely have been demonstrated already.

Malthus came back to earth in 1961 as Paul Sutton, who became a University of California Geographer. Naturally Paul grew up believing that the impact of too many people on the food supply and other earth resources was the most important subject imaginable. He shared Malthus' astonishment that humans had not trimmed their numbers yet and were still delaying the day of reckoning.

Malthus was reborn into a culture whose pro-natal views were, in some ways, more rigid than those of the 18th century. He didn't know what to make of the political fixation on the pre-fetal product of conception — a view that split political parties and caused mayhem and murder. "It must signify an

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

obsessional displacement of blame," Malthus mused, because of the thousands of years humans spent slaughtering innocents.

On the subject of population, Malthus found late 20th century America lost in a "fugue" state, which made it virtually impossible to have a discussion about how many people the earth could sustain.

Quadrupling the world's population in the past hundred years hadn't caused the expected consternation — in fact the increase was cheered in many quarters. Food shortages were blamed on distribution problems and worldwide starvation had been avoided so far, thanks to the genius of the Haber-Bosch synthesis of ammonia and the industrial production of nitrogen fertilizer.

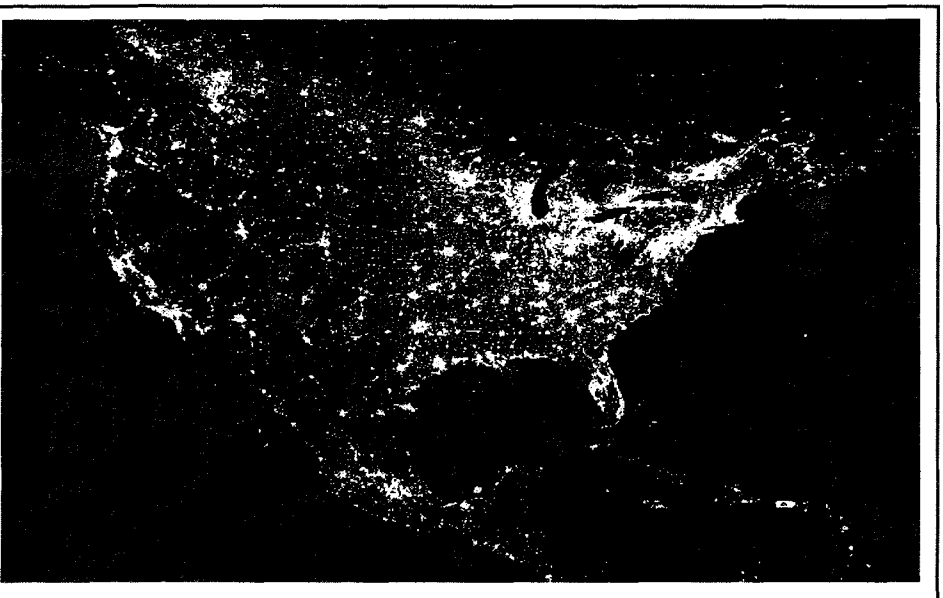
Fritz Haber never met Malthus because, as a maker of explosives, he didn't make it to heaven and was condemned to punishment in the fiery place. But he could have explained that all that smog they were getting in heaven was nitrous oxide acting on fertilizer nitrogen. And he knew that Malthus' predictions were likely to be right, even though his timing was wrong.

Malthus noticed that even though mass starvation hadn't happened in the way he anticipated, there were still eighty-seven countries that couldn't produce enough food and lacked the money to import it.

Huge swaths of Africa, south of Algeria and north of Zimbabwe, as well as mainland Asia, south of Uzbekistan, were food deficient. So were Afghanistan, Peru, Ecuador and Bolivia. Still, every 20 years, there was another billion more people, while net exporters of food, like the United States, lost three million acres of farmland for every additional 3 million people.

Malthus noticed that the race to feed the world was indeed a stimulus to innovation, but each new "fix" had a price. So far, so good, he thought, but what about tomorrow? He tried to grasp the mentality of the time he was living in. So he worked out on his new "perfect Buns" exercise machine while he listened to a recording of "Don't Worry, Be Happy" by Bobbie McFerrin, a one-man vocal ensemble, and a musician of the people.

"Don't Worry" applied, for example, to eutrification — just develop more high yield crops and look to millet and sorghum for salvation. Although eight hundred million people were on the brink of starvation and the land to feed them was limited, the consensus was: don't talk about it and "don't worry," because the angels and Professor Dyson will figure it out.



A Population Map of the U.S. Created by Nighttime Satellite Imagery
Photo by Chris Elvidge of the National Geophysical Data Center
at the National Oceanic and Atmospheric Administration, Boulder CO

Malthus was skeptical about how this willfully inattentive generation could handle the myriad technical problems of planetary survival, when they had such a hard time calculating how many people would have to be fed tomorrow and whether or not the earth had the resources to do it.

Reincarnated as geographer Paul Sutton, Malthus pursued his research by positioning himself in the sky with a jewel of a computer. He had a view of our globe from one of a very few satellites that

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

orbited the earth at night, taking pictures in the visible and in the near infra-red. Quite a journey, he thought, from his well-reasoned speculations about population to being part of the U.S. Defense Meteorological Satellite Program.

The first task was to determine how many people there actually were because in so many places the census was very unreliable. The U.S. could spend $4.5 billion, gathering and processing census information — an expense that could never be undertaken by poor countries. India, for example didn't have a clue as to what size population they had. Even China, geographers concluded, likely had half a billion more people than officially reported.

"So Malthus left his earthly body in Santa Barbara and flew skyward. ...He was surer than ever, in 1998, that a catastrophe was brewing..."

The research that Malthus was doing in his new incarnation used light as a proxy for population. Adjustments were made for lowered energy use depending on the level of development.

Working as Sutton, Reverend Malthus found to his astonishment that scientific miracles, like satellite imagery, were encased in as hard a shell of conceptual and language orthodoxy as the canons of the Anglican Church. Investigators had to apply for grant money from NASA using proxy words for population.

Sutton/Malthus called his project "global change research," even though most "global change" investigators were climatologists who measured the weather. He was disappointed at the equivocation that persisted despite the sophisticated technical jargon of his highly trained colleagues. But he realized he was one of them when he was as comfortable talking about the "parabolic population density decay function," as he had been reciting evening prayers.

In both his incarnations, Malthus was aware that the fundamental agent in global change is human presence and that the number and behavior of human beings drives all the global changes that we see. But neither NASA nor the Department of Defense wanted anyone to say that too loudly. It could be a problem for them because, as part of government, they would get into a lot of hot water with ethnic lobbies if they even brought it up.

So the result was that in the late 20th century you still couldn't get a grant from the U.S. government to study the environmental effects of increasing world population. Scientists with an interest in this matter had to disguise what they were doing and claim they wanted to study signs of global warming, the acres per minute of deforestation, or the ozone hole — anything, so long as it wasn't population.

Malthus finally remembered why this "gag order" was in place. It was part of the final legal settlement won against him by the Celestial Pro-Natalists and the O_2Bar chain. The judge had issued a blanket injunction against talking, writing or financing anything that might lead to population control. So, unless he wanted to join Fritz Haber in the inferno, he would have to wait for a new panel of judges in the heavenly Court of Appeals.

So Malthus left his earthly body in Santa Barbara and flew skyward. Two hundred years more would tell whether earthlings would trim their numbers, overflow into space, or cannibalize each other and die. He was surer than ever, in 1998, that a catastrophe was brewing that would prevent him from ever enjoying another game of lawn bowling on the grounds of the Crescent Hotel in Bath.

He could hear Freeman Dyson still hawking exotic solutions and seeing opportunity in the coming necessity. He was claiming that living in space was a challenge like scaling Mt. Everest, but forgot to acknowledge that even those mean peaks had base camps equipped with propane heaters and Hersheys.

But nestled in their Barcaloungers, ordinary Americans were not as keen as Freeman Dyson to exchange the camaraderie of the Rose Bowl games for the unfamiliar thrills of life on the Oort Cloud. So, faced with their cowardly intransigence, Freeman Dyson commissioned Richard Seed to begin a wholesale cloning of Edmund Hilary.

Living in space was not for everyone, but for septuplet mom, Bobbie McCaughy, it became a matter of necessity. She was obsessed with Cary's

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Pharmacy in Dobbs Ferry, New York and she took her $2 million in prize money — which was supposed to pay for cribs, car seats and strollers — and made a down payment on a second hand rocket. She was determined to launch Cary's Pharmacy out of the galaxy, with herself stowed way in the belly. She planned to land on one of Neptune's moons, where it would be cold, inhospitable, but ever so quiet.

Malthus had said his goodbyes to the University of California. Ensconced on his perch in a new NASA satellite, he kept an eye on both heaven and earth. He glimpsed the Cato Institute's Julian Simon on the right hand of the angels, and to his left were the Messrs. Archer, Daniels and Midland. That triumvirate now advertised nightly, on the Jim Lehrer News hour, how they planned to "set a table" for 50 billion people. With so many new mouths to feed, they were calling themselves, grandly, "A Supermarket to the Solar System." These interplanetary grocers had everything to gain from the colonizing of space and they were betting on Freeman Dyson.

When the continents finally cracked from the weight of too many people, Malthus became an instant celebrity. That was followed by a struggle for screen rights to the tragedy about who had to stay on the broken earth and who would be airlifted to Pluto.

The winning script was a musical called "Malthus in the Sky with Diamonds" and featured a reincarnation of Marilyn Monroe, singing that *they* and *he* were a girl's best friend. Of course Malthus had tried to be a best friend to everyone, but the powers that be weren't ready to let him.

Malthus spent his time in the sky, writing a new essay about the fate of our precocious but destructive young species. He turned back the reel of history — watching grown-up toddlers build and then tear down their most exquisite constructions, like Dubrovnick and the Parthenon. Flashes of brilliance often shone through the messes they were making and the shame of their abandoned children on the hillsides in Brazil. But Bobbie McFerrin's song "Not To Worry" was still what they were listening to.

So they super-glued the fractured globe and went on acting fearless, immortal and sublimely sure of themselves, though they were actually barely toilet trained and strikingly immature about how childbearing "put the whole world in their hands."

Nostalgia paid off at the academy awards. That classic hymn was converted to "rap" and featured in the score of *Malthus in the Sky with Diamonds.* It gave new life to that tune — one that Malthus kept humming while he waited fretfully through another 200 years, ever-watchful of the increasing emission of visible nighttime light and hoping for the first sign of its dimming, which would mean that humans were finally taking charge of their destiny. TSC

NOTES

1. Even if a miraculous consensus on the need for a population policy were achieved tomorrow, knowledge of the extent and distribution of human populations is presently inadequate. The size of urban clusters, as measured by satellite imagery, has a strong correlation with known populations figures and provides a new way to assess the nature, location and extent of human impacts worldwide and how they contribute to environmental change and agricultural transformation. *From technical papers and personal communication with Paul Sutton.*

2. Every canton in China is given a birth-death ratio quota and a certain amount of money comes to them from the government if they don't exceed their goal. They all claim to meet it. But that doesn't mean that China's population isn't growing. In every canton that has a population increase, local officials claim it is due to in-migration from elsewhere *in China.* This is a closed country, so the population increases can only be due to higher-than-replacement level birth rates. Geographers estimate that the population of China could be ½ billion more than the official figures — off the mark by nearly twice as many people as live in the United States. *Conference report: The American Association of Geographers. 1994.*

REFERENCES

Dyson, Freeman J., "Colonizing the Solar System," *The Atlantic Monthly, Vol.280, No.5, Nov.,1997.*

Bongaarts, John, "Can the Growing Human Population Feed Itself?" *Scientific American,* March 1994.

"Hunger: Complex Origins of Global Problem." *Los Angeles Times,* Dec.22, 1997.

Smil, Vaclav. "Global Population and the Nitrogen Cycle." *Scientific American,* July, 1997.

Sutton, Paul, et al, "A Preliminary Investigation of the Utility of the Low-Gain DMSP OLS Nighttime Satellite Imagery for Modeling Population Density." Department of Geography, University of California, Santa Barbara, California. Draft Paper.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

If Malthus Was So Wrong, Why Is Our World In Trouble?

by William R. Catton, Jr.

Minds that have not totally dismissed Malthus may realize that today's serious concern about human-induced global climate change[1] is consistent with an ominously Malthusian inference recently accepted by the authors of an environmentalist classic, the international best-selling book published in 29 languages, *The Limits to Growth* (Meadows et al. 1972). A quarter of a century ago those authors had argued that this planet's biogeochemical tolerance for the expanding human load would reach an ultimate limit within a century if then-current trends continued. Now they have updated their study. Over the years since their earlier book came out, various other writers suggested "resource and pollution flows had [already] grown too far," and when Meadows et al. (1992:xv) had "let our minds fully absorb the message" they concluded "The human world is beyond its limits. The present way of doing things is unsustainable."

Is that enlarged concern true? Has the load imposed on ecosystems by the human population of the world indeed already exceeded global human carrying capacity? If so, why do so many people still doubt it and dispute it (e.g. Kenney 1994; Maurice and Smithson 1984; Simon 1994; Wattenberg 1987) — two full centuries after Malthus (1798)[2] warned it could happen?

Reversing Malthus

Preconceptions and emotional commitments can easily distort our thinking about such matters. They can cause us to misperceive what was meant by something we hear or read (Durkheim 1982 [1895]:72-74). Even statements that seemed to the speaker or writer to be clear and unmistakable in meaning can be construed by reader or hearer[3] to mean the opposite of what was intended.

Ever since the time of Malthus this potential for distortion and misunderstanding has been operating. Important statements Malthus made have been taken to mean something quite different from what he was trying to say. Because of this, events, conditions and processes since his time that actually lend support to his ideas have often been cited as disproof of those ideas. This reversal of meaning of relevant evidence is seldom recognized.

Not least among such reverse interpretations of evidence is this: vast increases in the earth's human population since Malthus (1798) wrote his famous essay, and more or less commensurate increases in Earth's output of food for human consumption, have been taken as proof that Malthus was just plain wrong (Weeks 1989:64-65; Weller and Bouvier 1981:37).[4]

What did he say that is construed as having been disproved? And how have developments since his day supported rather than refuted his position?

The best known sentences from the 1798 essay on population by Malthus seem to be these: "Population, when unchecked, increases in a geometric ratio. Subsistence increases only in an arithmetical ratio" (Appleman 1976:20). The language is archaic, two centuries old. The same ideas would be expressed today in such words as these: population, apart from environmental resistance, tends to increase exponentially and can potentially outstrip an environment's ultimate capacity to sustain it.

Preconceptions and emotional commitments have kept almost everyone from paying appropriate attention to the particular phrase that, for Malthus, was key to understanding what he was about. What too many readers too easily overlook is the qualifying phrase, "when unchecked." The real aim of his famous essay was to call attention to the importance of the various conditions and processes that do, in fact, check population growth — keeping

William R. Catton, Jr. *is Professor of Sociology Emeritus, Washington State University. His e-mail address is: wrnlcatton@aol.com.*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

it short of maximum exponential increase. Analysis of the checks and their manner of operating was the aim of much of his essay, and especially much of its later revisions and his subsequent writing. There are such checks; they do operate. Their strength varies in different circumstances, and Malthus was quite aware of this. More has been learned since, and for full appreciation of the enlightenment Malthus tried to provide, we need to extend our understanding of his insights accordingly.

Social scientists are familiar with the distinction he made between "positive" and "preventive" checks. Population increase is "positively" checked by war, pestilence and famine — events or conditions that heighten human death rates. Population growth was "Preventively" checked, as Malthus saw, by misery and vice, which hold down birth rates. And in a revised edition five years later, he added "moral restraint," meaning principally such behavior patterns as celibacy and delayed marriage. Modern birth control techniques would seem to modern minds to qualify under his heading of moral restraint, though Malthus, in keeping with the temper of his time, would have classified them under "vice."

A Multi-species Perspective

Population regulation is viewed rather differently by modern ecologists. Their attention is not focused on just the single species, *Homo sapiens*, as was the attention of all too many of Malthus' readers. The single-species focus still holds for today's demographers who acknowledge that his "positive" checks have to do with human mortality rates and his "preventive" checks operate through fertility rates. But ecologists, agreeing that the Malthusian *tendency* toward exponential growth is commonly held in check, pay attention to the growth-limiting effects of interactions between species. According, they regard populations of particular species as (a) predator-limited, (b) resource-limited, or (c) self-limited (Lack 1954; Wynne-Edwards 1965). In other words, a population's tendency to proliferate is held down either by actions of other species that prey upon it, or by limited abundance of other species upon which it depends for sustenance, or by reproduction-curbing ways of interacting with its own conspecifics

There is only partial congruence between ecologists' three-fold classification of regulative patterns and the Malthusian two-fold classification more familiar to social scientists or demographers. Resource-limited populations are held down by sustenance shortages (but these conditions — famine and misery — may either raise mortality or lower fertility, or both). Self-limited populations are held down by behavior patterns (e.g. dominance hierarchies, territoriality, etc.) These may be animal analogues to "vice" or "moral restraint." Predator-limited populations are held down by mortality.

Due to familiarity of Malthus' assertion that "subsistence increases only in an arithmetical ratio," the issues he addressed have been perceived too narrowly between his time and now. His wisdom deserves to be broadened in two ways. First, too many people have supposed our species could enjoy perpetual growth and progress just by overcoming *resource* limits. Second, the word Malthus used, "subsistence," seemed to mean food, so too often it has been imagined that resource-limitation only meant food supply limits. Grow enough food and all will be well — so it seems to those who wrongly suppose other limiting factors need not constrain humanity's future.

Our ancestors long ago developed weapons that enabled escape from control of human population by mortality inflicted by large carnivores. And over the past century, through advances in medicine and hygiene, we have vastly increased our freedom from control by microscopic predators as well. It seems we have largely ceased to be a predator-limited species. But, applying the ecologist's perspective to the human case, one of the Malthusian "positive" checks, war, turns out to require special consideration. Is it to be classified as an instance of self-limitation or is it replacement for those earlier types of predator-limitation? Since *Homo sapiens* is a single species biologically, war would seem to be a means by which our species inflicts heightened mortality now and then upon "itself," contributing to our being a "self-limited" species. But humans are differentiated non-biologically into populations differing socioculturally — in religion, language, culture, national identity, etc. It is these differentiated "quasi-species" (Hutchinson 1965) that kill each others' members in war, so war could be deemed a kind of mutual predation.[5]

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

What Malthus Did Not Predict

Malthus in 1798 was not predicting an imminent end to world population growth by starvation. If we only remember the sentences where Malthus contrasted "geometrical" and "arithmetical" rates of increase, we are left to assume we have since overcome the self-inflicted mass starvation he was supposedly predicting as humanity's destiny. But food shortages are not the only resource shortage, and resource shortages are not the only factor in checking population growth.[6]

It is wrong to suppose that Malthus has been refuted by our "successfully" increasing the number of living humans from the roughly 950 million inhabiting this planet when his essay was published to nearly 6 billion today. It is like supposing the circular motions of the planets around the sun refute Newton's first law of motion. Newton said every moving body would continue in uniform linear motion "by forces impressed upon it." He did not say no forces were operating. The orbital revolutions of planets supported rather than refuted Newton, once one accepted his inference that the gravitational mass of the sun was indeed "impressing" a potent centripetal force upon the planets. Newton was never predicting straight line movement of other planets; Malthus was not predicting stoppage of growth by imminent famine. It behooves us to recognize that Malthus, like Newton, was using an axiomatic "law," together with an observed pattern of data, to infer the operation of a force or forces that could not be directly seen.

"[Malthus'] analysis is not contradicted either by the prodigious growth of population ... nor by heightened standards of living in today's industrial societies."

So his analysis is not contradicted either by the prodigious growth of population in the two centuries since he wrote his essay, nor by heightened standards of living in today's industrial societies.

Malthus showed that in certain unusual circumstances wherein a human population *is* very nearly "unchecked" (i.e., when that population happens to live in a largely unexploited land with virtually no competition for life-sustaining resources) then it could double itself in one generation. Such was the experience of European settlers in the American colonies, which Malthus described as an example. Their one-generation doubling time is, in fact, an approximation of the "intrinsic rate of increase" biologists attribute to our species, *Homo sapiens* (Odum 1971:179-183).[7]

Malthus Confirmed

Since the original publication of Malthus' essay, eight human generations have elapsed. Accordingly, if the kinds of checks on growth he analyzed had not been operating, then the world's human load would have doubled eight times. If their increase had been unchecked, the 950 million contemporaries of Malthus would have given us (by eight doublings) a present-day world population of about 242 billion. Today's actual world population of "only" somewhat less than 6 billion shows that some potent checks have indeed been operating. The "population explosion" we have had (Ehrlich and Ehrlich 1990), however much it threatens our future well-being, was not nearly as explosive as it might have been if Malthus had been wrong about those checks working. Preconceptions and emotional commitments have caused many to suppose growth from 950 million to nearly 6 billion *dis*proves Malthus. But even these preconceptions and commitments cannot obscure the fact that 6 billion is enormously less than 242 billion. And *that* fact is entirely consistent with the core meaning of Malthus' essay.

But were those checks that have indeed been operating potent *enough*? By holding the potential 242 billion down to a "mere" 6 billion, did they leave us a world not yet overpopulated, or do 6 billion already impose an unsustainable load on the global ecosystem? The question of sustainability is the real issue that was implicit in Malthus' essay — and that issue has become urgent in the time that has elapsed since he wrote.

Predator-limited *Resource* Species

Was Malthus wrong in supposing "subsistence" could only grow "arithmetically"? Did his analysis indicate that the vast majority of this increased

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

human load is necessarily condemned to starvation? Here we have even more need to restrain our preconceptions and emotional commitments. We must rephrase the question. The question should be not whether Malthus was right or wrong in depicting growth of "subsistence" as merely linear. Rather it ought to be a question of whether the principle he recognized, that population has an inherent tendency toward exponential growth when unchecked, is applicable only to one species, *Homo sapiens.*

Charles Darwin read the 1798 essay forty years later while struggling to develop a theory of the process by which natural forces mighty modify species. He recognized that the exponential growth tendency was applicable to *all* forms of life.[8] All the plant and animal species that provide or constitute "subsistence" for humans have this "power of population" themselves, the potential for exponential increase, *if unchecked.* What was less than clear to other readers of Malthus' essay, and may have been less than fully clear to Malthus himself, was the fact that human harvesting of these resource species constitutes a powerful check on their numerical growth.

If the reader of the present paper were to spend a minute contemplating a list of the things she or he has eaten today, it would be immediately obvious that most of the items on the list consist of some vital part of one or more species of organism. Often the foods we consume have to do with the parts of organisms involved in reproduction. The flour in our daily bread, made from wheat, uses as human sustenance seeds that thus do not grow to become another generation of wheat plants. Dough for the bread most likely also involves eggs which do not then incubate and hatch to become new chickens. And so on. The milk we drink or make into butter or cheese, obtained from cows, might have nourished young calves and thereby contributed to enlarging the cattle population in its next generation. The fact that, in the two-plus doublings of human numbers that did occur since Malthus, our consumption of these foodstuffs has not driven these resource species to extinction is an indication that Malthus was *right* about "the power of population." The resource populations had sufficient Malthusian check on their potential increase: the enormous human harvest of their substance.

Then why did Malthus resort to the notion that food (these products of resource species populations) could only increase linearly? Land, he recognized, was the ultimate resource-base supporting human population through its production of food crop plants and animals. And land was finite. New technology, agricultural chemistry advances, etc., could increase the humanly usable productivity of a given tract of land, but the finite total quantity of land ultimately must limit this potential for increasing food production. So, as a reasonable approximation for purposes of his argument, Malthus took the notion of linear increases of output by farms and pasturelands as the "resultant," so to speak, of combining the forces of land's finiteness with the exponential growth tendencies of resource species populations, with the voracious collective appetite of humans for harvesting the resource species, and with the possibilities of technological progress. It was not a bad approximation, given the state of knowledge in his time.

The state of knowledge is much different in our time, so we need a more sophisticated restatement of the basic proposition from Malthus. There had not begun to be an explicit science of ecology in his time. His essay helped instigate later development of that new science, after Darwin saw what Malthus was driving at and used the Malthusian insight to advance his own explanation of the implications of "struggle for existence" in the "web of life." Ecology began to develop as a systematic study of the interrelations in that web of life less than a century after Malthus wrote his essay, following recognition by Darwin and his successors that life was indeed bound in a web.[9] It took several decades of ecological study and thought before the web notion was sharpened into the ecosystem concept (Golley 1993).

Three Necessary Uses of Environment

In a particular ecosystem, if we focus on a particular species population — say, humans — their processes of carrying on life require taking materials and energy from other living and nonliving components of that ecosystem. As the energy is used by them, the materials are transformed. The transformed substances must go back into the ecosystem somewhere.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Thus every species has to use its environment in three ways: (1) as a supply depot, (2) as activity space, and (3) as a disposal site. Humans are no exception, except that modern industrial technology greatly magnifies human resource demands, enlarges our disposal needs, and even makes us more mobile, thus causing us to require more, not less, space for many of the activities to which we have grown accustomed.[10] Unless the other (living and nonliving) components of the ecosystem can supply a sufficient quantity of the user species' requirements, and can absorb and recycle metabolic products the user species must dispose of, then overuse by the user species will begin breaking down the system — to the ultimate detriment of the user species itself.

As we approached 6 billion, our numbers had already engendered (and we now encounter) many serious clashes between our "from which," and our "in which," and our "into which" uses of the planet.[11] Because we and our ancestors have not sufficiently heeded the warning Malthus issued two hundred years ago, it is now becoming harder and harder to find separate places for these three functions.

Modern industrial technologies have made per capita human resource appetites and ecosystem impacts colossal. Our cities are running out of disposal sites for solid waste. More and more, our need to draw potable water from rivers and underground aquifers conflicts with our use of land and rivers for disposing of effluents and other end-products of our industrial mode of life. Our need for unpolluted, breathable air clashes with our need to put into the atmosphere the toxic gases from our tailpipes, factory chimneys, power plants (and from the garbage incinerators sometimes glibly proposed as substitutes for available sites for "sanitary landfills"). It is a "SAD" fact that the three uses of the environment (Supply depot, Activity space, Disposal site) were easier to assign to separate locations, free from mutual interference, when contemporaries of Malthus had to share the planet with as few as 950 million fellow Earthlings.

Carrying Capacity: Malthus Updated

The state of subsequent ecological knowledge now permits restatement of the main theme from Malthus in the following terms: Any species using any environment as its life-supporting base has the potential for increasing beyond the capacity of that environment to *continue* providing the needed support. Construing Liebig's "law of the minimum" (Odum 1989:129-132) broadly, we can say a population is in deep trouble if an environment's capacity to serve any *one* of these three functions has ceased to suffice, whether or not that environment continues to be sufficient for one or both of the other functions.

Malthus, we can reasonably assume, would fully accept such a reformulation if he were living today. A mind as insightful as his would surely recognize that after two further centuries of knowledge accumulation, how essential it is to construe "support" as involving all three uses of the environment. It seems clear, moreover, that the consensus of contemporary ecological scientists would endorse the reformulation, apart from some lingering misunderstandings of the meaning of its fundamental term, carrying capacity.[12]

"In 1798 Malthus was not equipped by existing knowledge or vocabulary to make [carrying capacity] as plain as can now be done. ... we owe [him] an immense debt..."

Carrying capacity means, most succinctly, the maximum *sustainable* load. Sustainability is the essential ingredient of the concept. Overuse of an environment can impair its ability to sustain the user population. Extreme overuse can cause breakdown of ecosystem processes (Catton 1995). The maximum load that can be supported without beginning to cause system breakdown is the system's carrying capacity for its users. In 1798 Malthus was not equipped by existing knowledge or vocabulary to make this as plain as can now be done, but this is what his essay was launching us toward eventually recognizing. We owe Malthus an immense debt for getting us started.[13]

Two centuries further along in the development of technology, growth of human numbers, and accumulation of systematic knowledge about ecosystem processes, we have no excuse for

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

continuing to ignore or refusing to recognize the breakdown effects of overuse when they do occur. They are the indicators of human population's having overshot carrying capacity — or, stated otherwise, they are symptoms that indicate our passage from a former era of carrying capacity surplus to a much different condition today, an era of carrying capacity deficit.

Taking Serious Effects Seriously

We live in a time when "deficit reduction" has been a matter of intense and widespread discussion. Unfortunately the discussion has too often focused exclusively on fiscal deficits, with too little attention paid to the even more dire implications of uncontrolled growth of ecological deficits.

Given the usual preconceptions and emotional commitments about economic growth, "deficits," and Malthus, what if I had started this paper not by alluding to *The Limits to Growth* and *Beyond the Limits*, but instead with the Biblical admonition: "Beware of false prophets, who come to you in sheep's clothing but inwardly are ravenous wolves. You will know them by their fruits" (Matthew 7:15,16)? Such an opening text, following the title I chose for this paper, might have led the reader to suppose I was going to offer some dogmatic denunciation of "overpopulation alarmists," perhaps by insisting limits to growth were an economy-devastating figment of misanthropic attitudes. They are not, and in the context established by what I have said in previous pages, that passage from the Sermon on the Mount can now serve instead to suggest how we can know if our planet is overpopulated (despite the operation of Malthusian checks) — by learning to recognize the *effects* of overload. Know it by its "fruits," its consequences.

One of the founders of modern sociology re-expressed in non-Biblical language that idea about knowing something by its fruits. Emile Durkheim[14](1984 [1893]:26-27), almost a century after Malthus' essay, wrote that

> *...In science we can know causes only through the effects that they produce. ...Science studies heat through the variations in volume that changes in temperature cause in bodies, electricity through its physical and chemical effects, and force through movement.*

There are in our time some effects and causes we urgently need to recognize that were unknown to people of past generations.[15] The rising levels of greenhouse gases in Earth's atmosphere, the widening holes in the stratospheric ozone layer, the inexorable drawdown of many aquifers, the escalating depletion of mineral deposits and fossil fuel stocks, the deforestation of vast land areas, the loss of topsoil from farmlands, the spreading of deserts, the accelerating declines of species diversity all around the world — all of these must be seen as effects of populous industrialism (Ehrlich and Ehrlich 1990:58-59; Dietz and Rosa 1997), and should serve as signs we are seriously overusing our planet's ecosystems.

Two centuries after Malthus, it is dangerous to go on denying overpopulation and disregarding the ecological deficit.[16] In the face of the ecological deficit's increasingly discernible effects, no one should mistake the fundamental issues of our time. They are larger than simply the platitude about needing to put "jobs for people" ahead of protecting an "endangered species," or simply the call to favor "the economy" over "environmental special interests."

Such cliches are a form of denial. Denial is psychologically attractive, and on this matter it is socially favored, but this is hazardous to our future (Catton 1996). False prophets (e.g., Kahn et al. 1976; Simon and Kahn 1984; Wattenberg 1987; Simon 1994) come to us in the sheep's clothing of technological optimism, encouraging the belief that inevitable progress will dependably overcome whatever problems we generate. These commentators continue to insist that the carrying capacity concept has no relevance for either the population explosion or industrialization.

As they see it, the world cannot be considered overpopulated so long as most of its surface is not yet peopled as densely as, say, London or Tokyo. This overlooks the dependence of each thriving urban center on an environment far more extensive than the territory within its own boundaries, an indispensable hinterland to serve its source and disposal needs.

Humanity's future depends on unmasking these false prophets, and learning to know them by their fruits, by the consequences that would flow from stubbornly continuing to see the world in their Panglossian terms, by the ecosystem damage that

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

would become ever more overwhelming (and irreversible) if we allow their discounting of Malthus to persuade us ecological foresight is merely a luxury. TSC

NOTES

[1] Global climate is changing. This is no figment of someone's imagination. The National Oceanic and Atmospheric Administration declares the change is a reality (Warrick 1998). Changing climate will have real consequences for humankind. According to the Intergovernmental Panel on Climate Change, an international group of climate scientists assembled by the United Nations, this already serious problem is caused partly by human activities. Future consequences of continued human injection of CO_2 and other greehouse gases into the atmosphere are likely to include greater incidence of property-damaging floods, expansion of deserts, disastrous storms, and health-threatening heat waves (Goetze 1997).

[2] The 1798 essay is reprinted in full in Appleman (1976:15-130).

[3] I don't say "listener" because some who hear do not listen.

[4] For a truly egregious instance of this error, see Kahn et al. 1976.

[5] Since human populations have almost entirely emancipated themselves from limitation by other large predator species, and in the modern world have even evaded much predation by microbes (pestilence), has war (and other conflict) become a necessary substitute check on population growth for a formerly predator-limited species — a way of substituting human for non-human predators? It must be asked whether other "substitutes" could not serve as well, i.e., moral restraint.

[6] See Meadows et al. 1992, Chapter 3, and Catton 1980.

[7] For additional comments on the human "intrinsic rate" and human carrying capacity, see Odum (1989:156-159).

[8] In fact, it was so applied at least implicitly (and almost explicitly) by Malthus.

[9] On the history of the science of ecology see Tansley (1939, 1947); Egerton and McIntosh (1977); McIntosh (1985); Golley (1993).

[10] It is essential to recognize that for modern humans, the "sustenance" we require is not just food for our bodies. Human societies require fuels and various materials to "sustain" the myriad exosomatic structures and activities now common. People in industrial societies need to be seen as members of a new quasi-species, *Homo colossus*. The greater our per capita energy use, the larger our demand for non-food "sustenance" materials (of all kinds) and the more extensive and serious our impact on the environment. The supply depot demands, disposal site needs, and activity-space requirements of *Homo colossus* are indeed colossal compared to those of pre-industrial *Homo sapiens*.

[11] Although John Rohe (1997) doesn't express it quite this way, this is very much a theme of his excellent and timely book.

[12] For causes and implications of such misunderstandings, see Catton (1995).

[13] And we owe a similar debt to Chairman Brundtland (1987) and her World Commission on Environment and Development for insisting in our time that "[m]any of the development paths of the industrialized nations are clearly unsustainable."

[14] Durkhein was studying social solidarity, which was, he said, "an intangible virtuality too elusive to observe. To take on a form that we can grasp, social outcomes must provide an external interpretation of it."

[15] It is a tragic irony, however, that despite sociology's scientific aspirations and the considerable ingenuity of many of its early proponents, it has since developed largely with a worldview that seems to say "nature does not matter." See Murphy (1997).

[16] Is it *overpopulation* or *overconsumption* we tend to deny? Given the expectations (and aspirations) of living people, this is a distinction without a difference. The sustainable number of *Homo colossus* (i.e. humans equipped with powerful "exosomatic organs" — modern industrial technology) on planet Earth must surely be much less than the sustainable number of non-industrialized *Homo sapiens*. Some may argue that 6 billion would be a sustainable world population if all were willing to live at a pre-industrial level, but even if this were true, the prospect for global acceptance of an adequate degree of "voluntary simplicity" is dim. Given the presently occurring symptoms of ecosystem breakdown, it ought to be clear that if the "underdeveloped" Third World were to approach a First World level of living, then 6 billion would constitute overpopulation. And the problem will not be eliminated just by pejoratively labeling such a statement "neo-Malthusian," as the cornucopian-minded and ecologically naive are inclined to do.

SOURCES CITED

Appleman, Philip (ed.). 1976. *An Essay on the Principle of Population: A Norton Critical Edition*. New York: W. W. Norton & Company.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Brundtland, Gro Harlem. 1987. "Chairman's Foreword." pp. Ix-xv in World Commission on Environment and Development, *Our Common Future.* New York: Oxford University Press.

Catton, William R., Jr. 1980. *Overshoot: The Ecological Basis of Revolutionary Change.* Urbana: University of Illinois Press.

Catton, William R., Jr., 1995. "What Have We Done to Carrying Capacity?" pp. 162-170 in Scott Wright, Richard Borden, Margaret Bubolz, Luc Hens, Jonathan Taylor, and Thomas Webler (eds.), *Human Ecology: Progress Through Integrative Perspectives.* Bar Harbor, ME: The Society for Human Ecology.

Catton, William R., Jr., 1996. "The Problem of Denial." *Human Ecology Review,* 3 (autumn):53-62.

Cohen, Joel E. 1995a. "Population Growth and Earth's Human Carrying Capacity." *Science,* 269 (21 July):341-346.

Catton, William R., Jr., 1995b. *How Many People Can the Earth Support?* New York: W. W. Norton & Co.

Dietz, Thomas, and Eugene A. Rosa. 1997. "Effects of Population and Affluence on CO_2 Emissions." *Proceedings of the National Academy of Science, USA.* 94(January):175-179.

Durkheim, Emile. 1984 [1893]. *The Division of Labor in Society* (transl. by W. D. Halls. New York: The Free Press.

Egerton, Frank N., and Robert P. McIntosh (eds.) 1977. *History of American Ecology.* New York: Arno Press.

Ehrlich, Paul R., and Anne H. Ehrlich. 1990. *The Population Explosion.* New York: Simon and Schuster.

Goetze, Darren. 1997. "Road to Ruin?" *Nucleus: The Magazine of the Union of Concerned Scientists.* 19(Summer):1-3.

Golley, Frank B. 1993. *A History of the Ecosystem Concept in Ecology.* New Haven: Yale University Press.

Hutchinson, G. Evelyn. 1965. *The Ecological Theater and the Evolutionary Play.* New Haven: Yale University Press.

Kahn, Herman, William Brown, and Leon Martel. 1976. *The Next 200 Years: A Scenario for America and the World.* New York: William Morrow and Company.

Lack, David L. 1954. *The Natural Regulation of Animal Numbers.* New York: Oxford University Press.

Maurice, Charles, and Charles W. Smithson. 1984. *The Doomsday Myth: 10,000 Years of Economic Crises.* Stanford, CA: Hoover Institution Press.

McIntosh, Robert P. 1985. *The Background of Ecology: Concept and Theory.* Cambridge, UK: Cambridge University Press.

Meadows, Donella H., and Dennis L. Meadows, and Jorgen Randers. 1972. *The Limits to Growth.* New York: New American Library.

Meadows, Meadows and Landers, 1992. *Beyond the Limits: Confronting Global Collapse, Envisioning a Sustainable Future.* Post Mills, VT: Chelsea Green Publishing Company.

Murphy, Raymond. 1997. *Sociology and Nature: Social Action in Context.* Boulder, CO: Westview Press.

Odum, Eugene P. 1971. *Fundamentals of Ecology* (Third edition). Philadelphia: W. B. Saunders Company.

Odum, Eugene P., 1989. *Ecology: And Our Endangered Life-Support Systems.* Sunderland,MA: Sinauer Associates, Inc.

Rohe, John F. 1997. *A Bicentennial Malthusian Essay: Conservation, Population and the Indifference to Limits.* Traverse City, MI: Rhodes & Easton.

Simon, Julian L. 1994. "Pre-debate Statement." pp.5-65 in Norman Myers and Julian L. Simon, *Scarcity or Abundance? A Debate on the Environment.* New York: W. W. Norton & Company.

Simon, Julian L., and Herman Kahn. 1984. *The Resourceful Earth: A Response to Global 2000.* Oxford: Basil Blackwell.

Tansley, Arthur G. 1939. "British Ecology During the Past Quarter Century: The Plant Community and the Ecosystem." *Journal of Ecology,* 27:513-530.

Tarsley, Arthur G., 1947. "The Early History of Ecology in Britain." *Journal of Ecology,* 35:130-137.

Warrick, Joby. 1988. "World temperance record boosts theory of global warming." *Tacoma News Tribune,* January 9, p.A-6.

Wattenberg, Ben J. 1987. *The Birth Dearth.* New York: Pharos Books.

Weeks, John R. 1989. *Population: An Introduction to Concepts and Issues* (Fourth edition). Belmont, CA: Wadsworth Publishing Company.

Weller, Robert H., and Leon F. Bouvier. 1981. *Population, Demography and Policy.* New York: St. Martin's Press.

Wynne-Edwards, V. C. 1965. "Self-Regulating Systems in Populations of Animals." *Science,* 147 (26 March): 1543-1548.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Malthus Marginalized

The massive movement to marginalize the man's message

by Albert A. Bartlett

Two hundred years ago Thomas Robert Malthus was instrumental in introducing the world to a revolutionary new concept: the quantitative analysis of population problems which focused mainly on the different arithmetics of the growth of populations and of food supplies. Malthus showed that the use of numbers and simple analysis could yield an improved understanding of contemporary and future population problems, and that steady growth of populations would produce great and grave problems. Two hundred years of debate over the ideas of Malthus have left the debaters divided into two camps: the **believers** who accept the idea that it is appropriate to use the quantitative analysis to gain an improved understanding of the growth of populations and of food supplies, and the **critics** who don't. Let's look at the **critics.** Here's a graphic representation:

I — Believers
II — Critics
  a) Non-believers
  b) Diverters
    1) other causes
    2) sustainers
    3) them — not us

The **critics** of the quantitative Malthusian approach can be divided into two groups: the **non-believers** and the **diverters.** The **non-believers** assert that the quantitative analysis is wrong — the **diverters** seek to divert people's attention away from quantitative analysis and focus attention elsewhere.

The **diverters,** in turn, can be divided into three groups: those who would direct attention to **other causes,** to **sustainability,** and to **them: not us.**

Albert A. Bartlett, Ph.D., is Professor of Physics at the University of Colorado. Comments by e-mail can be addressed to him: barleta@stripe.colorado.edu.

The Critics of Malthus

The world today faces enormous problems which the **believers** hold to be caused largely by population growth.

The **non-believers** say that the world population is much larger today than Malthus could ever have imagined, and thus far starvation seems not to have been a major limiting factor in stopping the growth of world population. Hence, they assert, the Malthusian message of quantitative analysis is wrong. From this they sometimes extrapolate to say that the human population can go on growing forever (Simon 1995).

It is easy to suspect that some of the **non-believers** are innumerate. ("Innumeracy" is the mathematical equivalent of illiteracy.)

The **diverters** do everything they can to divert attention away from the quantitative Malthusian message about population growth, asserting that the numbers are not the important aspect of the problem.

The Diverters

The **diverters** are divided into three groups:

The **other causes** group would have people believe that the problems of population growth are best addressed not by looking at the numbers, but by focusing our attention on other things.

The **sustainers** try to convince people that we need not worry about population because "sustainable development" will solve the problems.

The **them: not us** group seeks to divert attention away from the population problem in the United States and focus people's attention on the growth of populations elsewhere.

In total, the works of the several groups of **critics** constitute a massive effort to marginalize the modern Malthusian message.

The Techniques of Marginalization

The techniques of marginalization reflect the views of the different groups of **critics.**

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

NON-BELIEVERS: In dealing with the size of populations, the **non-believers** vigorously and authoritatively deny that quantitative analysis is important, that numbers mean anything, or that steady growth will produce intractable problems. This belief is supported by the observation that the world population in 1998 is much greater than *Malthus would have anticipated, and the population* growth continues. Many of the **non-believers** are not scientists. They assert that science and technology have made this growth possible and that science and technology can make possible all things that we wish to have in the future. In this regard the **non-believers** seem to put their faith in Walt Disney's First Law: wishing will make it so.

The **non-believers** marginalize Malthus by asserting that his predictions, and hence his methods, have been proven wrong.

DIVERTERS: The **diverters** use one or more of the following three ways to divert attention away from the message of the quantitative analysis.

(1) Other Causes: This group seeks to divert attention away from quantitative analysis and to focus it on any of a host of other relevant things such as the machinations of the multi-national corporations, excessive personal consumption of resources, large numbers of teen-age pregnancies, or on the failures of the systems of distribution, equity, justice, education for women, etc. The other causes people are often genuine humanitarians who are greatly to be admired because of their real records of achievement in their efforts to solve problems in these other fields. The other causes people commonly claim that the problems are not simple ones that can be simply solved by the Malthusian method of quantitative understanding. The other causes people may invoke complexity to give the impression that they, and not ordinary people, have the complex expertise is needed to understand and solve the problems. This serves to divert attention away from the fundamental Malthusian message of numbers and arithmetic, and leads the other causes people to advocate that priority attention should be given to these other causes rather than to the numbers *per se.*

SUSTAINERS: The **sustainers** introduce the optimistic terms "sustainability" and "sustainable development." The use of these terms gives the untutored listener the comforting impression that the **sustainer** understands the problems and knows their solutions. In order to achieve the desired diversion, the works of the **sustainers** follow two paths:

First, the **sustainers** must be authoritative and simultaneously they must be vague and contradictory in the use of terms. Above all, the **sustainer** should *avoid giving the term "sustainability" a meaningful* definition that would cause ordinary people or political leaders any discomfort in their daily lives.

Second, the **sustainers** gain credibility by advocating good programs (reducing resource use, etc.) that are potentially environmentally beneficial, but which divert attention away from the fundamental Malthusian problem of population growth. Unfortunately, the resources that the **sustainers** save are not preserved for the use of future generations, but rather are used to support the current growth of the population. Thus, the net result of many of the actions of the **sustainers** is to accommodate, encourage, and thus to increase population growth.

THE "THEM—NOT US" GROUP: Some **diverters** in the U.S. assert that the population problem is a problem of "those people," meaning people in under-developed nations. By making this assertion, they divert attention away from the severe problems of population growth in the U.S.

When "those people" in the under-developed nations see that they are the target of the **them—not us** folks, they often respond that the problems are not the numbers but rather the excessive consumption in the developed nations. (**other causes**)

Fundamentals

The term "sustainable" has to mean "for a very long time."

The arithmetic shows that steady growth (a fixed percent per year), which Malthus used in his analysis of populations, results in enormous numbers in modest periods of time (Bartlett 1978).

These two facts lead to the first two Laws of Sustainability (Bartlett 1994):

First Law: Population growth and/or growth in the rates of consumption of resources cannot be sustained.

Second Law: The larger the population of a society and/or the larger its rates of consumption of resources, the more difficult it will be to transform

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

the society to a condition of sustainability.

These facts also support the observation that the term "sustainable growth" is an oxymoron.

The balance of this paper will give examples of the several types of marginalization of the modern Malthusian message.

Non-Believers

There is an abundant literature dealing with the **non-believers**. Some **non-believers** assert that the predictions of Malthus have not come to pass, that the world population in 1998 is much larger than Malthus could have ever imagined, therefore the world population can continue to grow essentially forever. This is an example of the "flying leap syndrome" in which a person leaps from the top of a very high building. The free-fall is exhilarating. After each of the first few seconds of free-fall, the person concludes that all is well, and soon reaches the (logical?) conclusion that things will be alright forever. The end comes when the person strikes the ground. The ground was a boundary condition, a limit that the person had ignored at great expense (Bartlett 1980).

The **non-believers** seem unaware of, or ignore, the fact that human activities have already caused great change in the global environment. Many fail to observe that the scale and scope of human activities have, for the first time, grown to rival the natural processes that built the biosphere and that maintain it as a place where life can flourish (May 1993).

Many facts testify to this statement. It is estimated that somewhere between 20 and 40 percent of the earth's primary productivity — from plant photosynthesis on land and in the sea — is now appropriated for human use.

On the national scene, there are prominent presidential-type people who are **non-believers** and who assert that there is no population problem.

When Jack Kemp, who was then the U.S. Secretary of Housing and Urban Development, was informed of a report from the United Nations that told of resource problems that would arise because of increasing populations, it was reported that he said, "Nonsense, people are not a drain on the resources of the planet" (Kemp 1992).

Another presidential aspirant, Malcolm Forbes, Jr., editor of *Forbes Magazine,* had a similar response to the reports of global problems that result from overpopulation in both the developed and underdeveloped parts of the world. In an editorial he responded, "It's all nonsense" (Forbes 1992).

These two expressions are consistent with a prominent Ponzi-type slogan that is often heard in U.S. presidential politics: "We can grow our way out of the problems."

In his article, "The Population Explosion is Over," Ben Wattenberg finds support for his thesis in the fact that fertility rates are declining in parts of the world (Wattenberg 1997). Most of the countries of Europe are (1997) at zero population growth or even negative population growth, and fertility rates in parts of Asia have declined dramatically. Rather than rejoicing over the clear evidence of this movement in the direction of sustainability, Wattenberg sounds the alarm over the "birth dearth" as though this fertility decline requires some immediate reversal.

The late Professor Julian Simon of the University of Maryland has advocated continued population growth long into the future. In the newsletter of a major think tank in Washington, D.C., Simon wrote:

> *We have in our hands now — actually in our libraries — the technology to feed, clothe, and supply energy to an ever-growing population for the next 7 billion years... Even if no new knowledge were ever gained ... we would be able to go on increasing our population forever* (Simon 1995).

In response to Simon, it has been noted that a spherical earth is finite, but a flat earth can be infinite in depth and lateral extent. So if Simon is correct, we must be living on a flat earth (Bartlett 1996).

When evaluating the works of people with impressive academic credentials, it is important to remember another fundamental law: for every Ph.D. there is an equal and opposite Ph.D.

Sustainers: The Brundtland Report

A great increase of awareness of the problems of global poverty and population problems came with the publication of the report of the United Nations World Commission on Environment and Development, the Brundtland Report, which is available in bookstores under the title *Our Common Future* (Brundtland 1987).

In graphic and heart-wrenching detail, the Report places before the reader the enormous problems and suffering that are being experienced

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

with growing intensity every day throughout the underdeveloped world. In the foreword, before there was any definition of the term "sustainable," there was the ringing call:

> *What is needed now is a new era of economic growth — growth that is forceful and at the same time socially and environmentally sustainable* (p.xii).

These two concepts of "growth" and "sustainability" are clearly in conflict with one another, yet here we see the call for both. The use of the word "forceful" would seem to imply "rapid," but if this is the intended meaning, it would just heighten the conflict. No hint is given as to the definitions of the terms, "socially sustainable" and "environmentally sustainable."

"...in order to be accepted the discussion had to be optimistic, even though the facts point to pessimism."

A few pages later in the Report we read:

> *Thus sustainable development can only be pursued if population size and growth are in harmony with the changing productive potential of the ecosystem* (p. 9).

"Population size and growth" are vaguely identified here as possible problem areas, but we don't know what the Commission means by the phrase "in harmony with..."

By page 11 the Commission acknowledges that population growth is a serious problem, but then:

> *The issue is not just numbers of people, but how those numbers relate to available resources. Urgent steps are needed to limit extreme rates of population growth* [emphasis added].

The suggestion that "the issue is not just numbers of people" is characteristic of **non-believers**. Neither "limit" nor "extreme" are defined, and so the sentence gives the impression that most population growth is acceptable and that only the undefined "extreme rates of population growth" need to be dealt with by some undefined process of limiting.

By now one can see how the **sustainers** and **non-believers** confidently make assertions that are both vague and ambiguous.

As the authors of the Report searched for solutions, they called for large efforts to support "sustainable development." The Report's definition of "sustainable development" has been widely used by others. It appears in the first sentence of Chapter 2, (p. 43):

> *Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*

This definition gives no hint regarding the courses of action that could be followed by individuals or by governments to allow people to meet the needs of the present, but which would not limit the ability of generations, throughout the distant future, to meet their own needs. It is obvious that non-renewable resources (such as fossil fuels) that are consumed now will not be available for consumption by future generations. Anyone advocating develop-ment has to know that if development is to be sustainable, it must call for major reductions in the rates of consumption of fossil fuels so that future generations may have access to these wonderful sources of energy. This uncomfortable fact is rarely acknowledged.

The discussion of "sustainability" in the Brundtland Commission Report is both optimistic and vague (*see addendum*). The Commission probably felt that, in order to be accepted, the discussion had to be optimistic even though the facts point to pessimism. So it was necessary to be vague and contradictory in order not to appear to be pessimistic. Vagueness is the key to the arguments of the **sustainers**.

Sustainers: The Agenda 21 Report

Ambiguity about the meaning of "sustainability" was advanced in a more recent report that came out of the 1992 Earth Summit in Rio de Janeiro, which was:

> *...the largest gathering of world leaders in history [and which] endorsed the principle of sustainable development.* (Committee for a National Institute for the Environment 1993)

The published version of the report carries the impressive title, *Agenda 21, The Earth Summit Strategy*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

to Save Our Planet. (Sitarz 1993) The text discusses the relation between population growth and the health of the planet:

> *The spiraling growth of world population fuels the growth of global production and consumption. Rapidly increasing demands for natural resources, employment, education and social services make any attempts to protect natural resources and improve living standards very difficult. There is an immediate need to develop strategies aimed at controlling world population growth* (p. 44).

The first sentence is quite reasonable, but in the third sentence, what is meant by "controlling?" "Controlling world population growth" could mean, "hold the annual population growth rate at its 1993 value of approximately 1.6 % per year," which no numerate person would suggest. Why does the Report use the phrase "controlling world population growth" when one suspects that the Report's authors know full well that the critical challenge is to "stop world population growth?" Having thus made a politically correct statement of the problem, the Report then lists the things that need to be done. Here we would expect that the authors would concentrate on the hard realities. Instead, it is all ambiguity. Perhaps their strongest recommendation is:

> *The results of all research into the impact of population growth on the Earth must be disseminated as widely as possible. Public awareness of this issue must be increased through distribution of population-related information in the media* (p.45).

How are we going to increase public awareness of the problem of "the impact of population growth on the Earth" if the crucial report that gives guidelines for the future won't talk frankly and honestly about the problem? How are we going to educate the public about the problem of population growth if we fail to set forth clearly the known concrete details of "the impact of population growth on the Earth?"

Then, under the Report's next heading, "National Population Policies," we read that:

> *The long term consequences of human population growth must be fully grasped by all nations. They must rapidly formulate and implement appropriate programs to cope with the inevitable increase in population numbers* (p.45).

The first sentence suggests that the writers of the Report are **believers**, because they indicate a recognition of the fact that there are serious "long term consequences of human population growth." These consequences could have been set forth in simple, concrete, and illuminating detail, and yet the Report remains evasive, vague, and unspecific. The Report could have educated its readers about the "long-term consequences of continued population growth" and then could have identified for the readers the appropriate remedial courses of action which are necessary to achieve zero growth of population as rapidly as possible. But to negate it all, the Report refers to the "inevitable increase in population numbers." Thus the Report seems to say that nothing can be done, which is not far from the position of the **non-believers** who say that nothing needs to be done. This leads to the question, "If nothing can be done, why bother to educate people about the 'long-term consequences of continued population growth'?"

"[Population growth] is the engine that drives everything."
— Robert May

The Report makes many references to sustainability, yet it artfully dodges the central issues relating to the meaning of "sustainability."

The failure of the Report, and other similar reports, to address the population problem was underscored by Robert May (May 1993). May, who is Royal Society Research Professor at the University of Oxford and Imperial College, London, was reviewing a new book on biological diversity. He observes that the book:

> *...says relatively little about the continuing growth of human populations. But this is the engine that drives everything. Patterns of accelerating resource use, and their variation among regions, are important but secondary: problems of wasteful consumption can be solved if population growth is halted, but such solutions are essentially irrelevant if*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

populations continue to proliferate. Every day the planet sees a net increase (births less deaths) of about one quarter of a million people. Such numbers defy intuitive appreciation. Yet many religious leaders seem to welcome these trends, seemingly motivated by calculations about their market share. And governments, most notably that of the U.S., keep the issue off the international agenda; witness the Earth Summit meeting in Rio de Janeiro. Until this changes, I see little hope.

Other Causes: The U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency has done many constructive and beneficial things. The policies, actions, and leadership of the Agency are crucial to any hope for achieving a sustainable society. A recent report (EPA 1993) is both encouraging and distressing. It is encouraging to read of all of the many activities of the Agency which help protect the environment. It is distressing to search in vain through the Report for a direct acknowledgment that population growth is the root cause of most of the problems the Agency is seeking to address. While the Brundtland Report asserts that population growth is not the central problem, the EPA report avoids making even this mild allegation. The EPA report makes only a very few minor references to the environmental problems that arise as a direct consequence of population growth, but in making these references, the Report seeks to divert the reader's attention elsewhere.

"...search in vain through the report for a direct acknowledgment that population growth is the root cause of most of the problems the agency is seeking to address."

For example, the EPA report speaks of an initiative to pursue sustainable development in the Central Valley of California:

> *where many areas are experiencing rapid urban growth and associated environmental problems... A stronger emphasis on sustainable agricultural practices will be a key element in any long-term solutions to problems in the area.*

Why does the Agency divert our attention away from the problem of rapid urban growth and suggest that the long-term solution lies in "A stronger emphasis on sustainable agricultural practices?" There is no way that "A stronger emphasis on sustainable agricultural practices" can stop the "rapid urban growth" that is destroying farmland! To solve the problems, one must stop the "rapid urban growth" which causes the problems. It is pointless to focus on the development of "sustainable agricultural practices" when agriculture will soon be displaced by the "rapid urban growth."

In speaking of the New Jersey Coastal Management Plan for the preservation of an environmentally sensitive tidal wetland, the EPA report says:

> *The project involves balancing the intense development pressures in the area with wetlands, wildlife protection, water quality, air quality, waste management, and other environmental considerations.*

The "intense development pressures" arise from population growth, but the Report diverts our attention away from "development pressures," by suggesting that the problems can be solved by "balancing." The wetlands can't be saved if population growth continues. The wetlands can't be solved by balancing, whatever that is. It needs to be recognized that "balancing" generally means "yielding to."

In the Pacific Northwest:

> *The EPA... is an active participant in these discussions, which focus on sustaining high quality natural resources and marine ecosystems in the face of rapid population and economic growth in the area.*

Here the Report diverts our attention away from the "rapid population growth" that is destroying the natural resources and marine ecosystems, and it suggests instead that we focus our preservation efforts on the ecosystems and not on the agent that is destroying them. This is like trying to polish and maintain the beautiful woodwork in a home that is being destroyed by fire, or like trying to rearrange the deck chairs on the *Titanic.*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

These quotations of minor sections of the EPA report make it clear that the EPA people have an understanding of the origin of environmental problems. This means that the Agency people are **believers**. However, political considerations seem to require that the EPA people divert attention away from the true causes of the problems they are charged with addressing.

More Examples of Marginalization

Here are more examples of major efforts to marginalize the use of numbers in addressing the population problems.

EXAMPLE A (**Diversion**)

For many years the mission statement of a national population organization was:

> *Zero Population Growth, Inc., is a national nonprofit membership organization that works to achieve a sustainable balance of resources and the environment — both in the United States and worldwide* (ZPG 1996a).

In 1996 , without discussion with the membership, this clear and unambiguous mission statement was replaced by the following statement which is vague and internally contradictory:

> *Zero Population Growth, Inc., is a national nonprofit membership organization working to slow population growth and achieve a sustainable balance between the Earth's people and its resources* (ZPG 1996b).

Notice that the new statement contains two curious contradictions:

1.) Zero Population Growth (the organization's name) is quite different from slow population growth (the new stated goal of the organization). This would seem to violate standards of "truth in advertising."

2.) The organization is seeking "slow population growth" and "sustainability." These two goals are completely contradictory. The new statement violates the First Law of Sustainability (Bartlett 1994).

The new statement also suggests a major change in emphasis — the new statement does not contain the earlier reference to the population problem in the United States (**them: not us**)

The diversion of the acknowledged focus away from the population problem of the United States is disturbing, especially when the case can be made that *the world's worst population problem is in the U.S.* (Bartlett 1997). This is all the more curious because much of the good work of ZPG is devoted to reducing population growth rates in the United States.

Even more curious is the fact that the Executive Director (of ZPG):

> *...outlined some of the actions necessary to stabilize U.S. population. He called for doubling expenditures for family planning programs, requiring insurance plans that provide prescription drug coverage to include all contraceptive services* (Audubon 1998).

Two things are apparent:

1.) The things called for by the Executive Director are necessary, but clearly are not sufficient to stabilize U.S. population, because:

2.) Immigration contributes roughly half of the growth of U.S. population, and it has been shown that it is impossible to stabilize U.S. population without having major reductions in the levels of immigration into the U.S. (Bartlett & Lytwak 1995, and many others).

The refusal to include immigration in the discussion of the stabilization of U.S. population represents a major effort to divert attention away from the source of approximately half of the population growth in the U.S.

EXAMPLE B (**Non-belief**)

The Sierra Club has an outstanding record of successes in the endless battle to save the environment, and for years the Club recognized that stopping population growth in the U.S. was essential to saving the environment. Recently the Club's leaders decided that we could have population growth *and* save the environment, saying in particular that the Club would not take a stand on the difficult question of immigration (which is responsible for about half of the population growth in the U.S.) This is a case of innumerate **non-belief**. Some members of the Club (**believers**) have petitioned to have the membership vote, in a 1998 ballot, on the question of going back to the earlier policy of recognizing that we can't save the environment and have continued population growth.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

EXAMPLE C (**Diversion**)

The conflict within the Sierra Club led the Club's establishment to put on the 1998 ballot a diversionary alternative to the straightforward question put by petition of members. The alternative statement contains this sentence:

> *The Sierra Club will continue to address the root causes of migration by encouraging sustainablity, economic security, human rights, and environmentally responsible consumption* (FAIR 1997).

In a similar major policy statement, ZPG says:

> *It is ZPG's view that immigration pressures on the U.S. population are best relieved by addressing factors which compel people to leave their homes and families and emigrate to the United States* (ZPG 1998).

The implications of these two statements are high minded and staggering. A major root cause of migration is the global inequality of economic opportunity. These sentences would commit these two organizations to programs of foreign aid and international involvement aimed at leveling the economic opportunity among all of the countries of the world! This would commit the two organizations to the task of raising the level of economic opportunity in the underdeveloped countries and possibly lowering it in the United States until economic opportunity was everywhere the same, so that this root cause of migration had been removed!

"...the challenging task of addressing the issue of immigration which is responsible for about half of the population growth in the United States."

Beyond lobbying the Congress for increased family planning assistance in the foreign aid programs of the U.S., these two organizations do not have the resources needed to become involved in any meaningful way in addressing the root causes of international migration. Therefore these two statements are essentially devoid of substantive meaning, and are offered only to divert attention away from the challenging task of addressing the issue of immigration which is responsible for about half of the population growth in the United States.

With the best of intentions, religious groups often justify their opposition to the reduction of immigration into the U.S. by using this same argument (**diversion**), saying that we should not address immigration but should work instead to remove the root causes of immigration.

EXAMPLE D (**Diversion**)

The President's Council on Sustainable Development (PCSD) had task forces that worked to develop background information in several areas. The report of the Council's Task Force on Population and Consumption (Task Force 1995) was clear and unambiguous:

> *The Task Force believes that the two most important steps the United States must take toward sustainability are:*
> *1.) to stabilize U.S. population promptly; and*
> *2.) to move toward greater material and energy efficiency in all production and use of goods and services.*

The Council's report (President's Council 1996) was based on its own analyses and on the reports of its task forces. The Council's report makes almost no editorial statement about the problem of population growth in the U.S. but it does indicate concern about global population growth (them: not us):

> *The United States should have policies and programs that contribute to stabilizing global human population: this objective is critical if we hope to have the resources needed to ensure a high quality of life for future generations.*

Although it probably was not meant this way, this sentence could be interpreted to mean that **they** must stop their population growth so that **we** can continue to have a high quality of life. The Report notes that:

> *What Americans do affects the lives of people in every nation, and changes in their lives eventually affect Americans.*

Then, in its list of "National Goals Toward Sustainable Development," the PCSD places "Move toward stabilization of U.S. population" as the eighth

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

goal out of ten (**diversion**). The most necessary goal for achieving sustainability is diverted from the top priority to a place near the bottom of the list.

The section of the PCSD report, "Designing Sustainable Communities" (pp.92-95) deals with creative ways to accommodate growth (**non-belief**):

> *While some growth is necessary, it is the nature of that growth that makes the difference.*

If it is felt that the U.S. should "Move toward stabilization of U.S. population," why is "some growth necessary?"

It is frightening to realize the reluctance of our national leaders even to acknowledge that population growth in the U.S. is a problem.

EXAMPLE E (**Them: not us**)

A recent report (PAI 1996), "Why Population Matters, 1996" has the appearance of being a comprehensive review of the global population problem. The 55 pages include text, data, and a large number of well-presented graphs, covering facts and figures, economic development, environment, safety and health, as well as general principles and conclusions. The name of the group that prepared the report is Population Action International, which suggests a focus on the international aspects of the problems. This is borne out in the introduction:

> *The purpose here is to state the demographic case... for U.S. assistance to programs that help slow population growth in developing countries.*

Here is what appears to be a comprehensive report on world population problems, that makes little or no effort to present the population problem of the U.S., even though the U.S. is a major part of the international scene. By omission, the Report conveys the impression that there is no population problem in the U.S.

In the last section of the Report we read:

> *Slowing world population growth is important for all Americans.*

An even more cogent observation, that is not in the Report, would be:

> *Because of our high per capita consumption of resources, slowing U.S. population growth is important for all the people of the world.*

It is so easy to say that the problem is **them: not us.**

EXAMPLE F) (**Diversion**)

A recent scholarly report with the title "Getting it Right: A Policy Agenda for Local Population Activists" (Jacobsen 1997) opens by identifying population growth as the ultimate problem:

> *Thus it is necessary to aim at containing population growth at the local scale, if we are to create communities that are sustainable over the long term.*

The Report then seeks to divert attention away from "containing population growth" when it suggests that it is politically unproductive to say that "the root of all our problems is too many people."

"Growth management is an attractive contemporary term. It is an effort to accommodate, and hence to encourage, more population growth."

(**diversion**) The Report seeks to have local activists focus on the important problems (**other causes**) such as teen-age pregnancies, resource consump-tion, etc., and the Report advocates local programs of growth management. Growth management is an attractive contemporary term. It is an effort to accommodate, and hence to encourage, more population growth.

If we are going to "Get it Right," we can't continue to overlook the numbers.

EXAMPLE G (**Diversion**)

Boulder County, Colorado is in a scenic and attractive location. For decades, "civic groups" in the towns and cities of the County have been enormously successful in the promotion of population growth in the County. All sorts of public and private efforts have been made to attract new "clean" industries, laboratories, etc. to come to the County. The result has been totally predictable.

The concentration on recruiting "clean" industries implies that we will keep out the "dirty" industries. We all want the products made by "dirty" industries, but we don't want the "dirty" people who work in those industries. This is economic

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

discrimination. We are emphatic in our assertions that we want all ethnic and economic groups represented in our local population, but to achieve this, we must have in our community all types of "clean" and "dirty" industries. With proud public pronouncements of our high minded ideals, we keep out the "dirty" industries and then wring our hands to lament the lack of ethnic and economic diversity in our community.

The schools in the City and County are crowded, the streets and highways are congested, the air is polluted, and farms are being destroyed by subdivisions at a rapid rate. The houses that are being built on the former farmland are not for ordinary people but rather for people at the middle and high end of the economic scale. Taxes have to rise to pay the costs of the growth, making it difficult for people on fixed incomes to continue to live in Boulder. Home prices and rents rise relentlessly, and consequently homelessness and helplessness seem to have increased.

The high taxes and the high cost of housing fall hardest on low-income people, some of whom are third or fourth generation residents of the County. Yet the City and County are booming and it is claimed that we have a "healthy economy." The success of the promotions, and the resulting deterioration of many aspects of the community have prompted "slow growth" efforts on the part of citizens groups, and these efforts have resulted in conflict and hostility.

An outgrowth of this has been the Boulder County Healthy Communities Initiative, (BCHCI) which has brought together volunteers from all parts of the County who have been trying to deal with the problems caused by population growth.

All of the problems that bring together the good people of the BCHCI are the immediate and predictable consequences of population growth. Yet the programs of the BCHCI are devoted to inspirational speakers (**non-believers**) who admonish the participants to work harder, and to develop better plans to accommodate the growth. Speakers (**sustainers**) often use the word "sustainable" in the meetings, as if, working harder, we could have a sustainable society. A document titled "Principles of Sustainability" was prepared and circulated (Draft Principles 1996).This document has sections that are vague:

> *Fundamentals:*
>
> *1) It Has to Add Up — We recognize that every activity counts in working toward sustainability and all our activities must add up to sustainability.*

It has some sections that are good:

> *4) Materials and Energy — To the maximum extent possible, activities in Boulder County should reduce, reuse, and recycle resources; avoid the production, purchase, and use of toxic materials; use energy as efficiently as possible; seek to use local sources; and contribute to a transition toward a renewable-based economy.*
>
> *11) Cultural and Ethnic Diversity — We should respect and encourage cultural, ethnic, and economic diversity, the social counterpart to biological diversity.*

Some sections are far-sighted:

> *9) Power of Prevention — Boulder County programs should be designed to prevent problems whenever possible, rather than focused on correcting problems after they occur.*

But these "Principles of Sustainability" never deal with the Laws of Sustainability or with the population growth that has caused the problems that the BCHCI is trying to solve. The "Draft Principles of Sustainability" make no mention of the fact that population growth is not sustainable. This document is not really "Principles of Sustainability," but rather it is "Principles That We Would Like to Sustain."

The problems addressed by the **diverters** are important. The education of women, the distribution of resources, economic and political justice and equity are all vitally important. The world is well served by those selfless people who work hard to solve these problems. Yet as we look here in the United States, and around the world, we can see that the sizes of populations are growing, and we can see places where the problems associated with the growth are so overwhelming as to make it practically impossible to find the resources necessary to address the vitally important issues of education of women, distribution of resources, justice, and equity.

EXAMPLE H (**Diversion; other causes**)

In a "Historical Note" appended at the close of an article on population, the "Editor" reported: (Abernethy 1998):

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Secretary of the Interior Bruce Babbitt, in a May 26, 1997 interview with ABC, explained forthcoming new regulations for national parks. These included requirements for advance reservations, use of public transportation within parks, and all private vehicles to be left in parking lots at entrances. Secretary Babbitt denied that these restrictions resulted from there being too many people using the parks.

OUR GREATEST NATIONAL NEED

The thing that is most urgently needed is the initiation of a broad national dialog on the problems of the size and growth of U.S. population.

A Response to the Diverters

The arguments of the **diverters** were pointedly rebuffed by the biologist E.O. Wilson who wrote:

The raging monster upon the land is population growth. In its presence, sustainability is but a fragile theoretical construct. To say, as many (**diverters**) *do, that the difficulties of nations are not due to people but to poor ideology or land-use management is sophistic* (Wilson 1995).

BOULDING'S THREE THEOREMS ON POPULATION

In a foreword to a reprinting of the essay of Malthus, the eminent economist Kenneth Boulding addressed the problem forthrightly by offering three theorems (Boulding 1971):

First Theorem: The Dismal Theorem

If the only ultimate check on the growth of population is misery, then the population will grow until it is miserable enough to stop its growth.

Second Theorem: The Utterly Dismal Theorem

This theorem states that any technical improvement can only relieve misery for a while, for so long as misery is the only check on population, the [technical] improvement will enable population to grow, and will soon enable more people to live in misery than before. The final result of [technical] improvements, therefore, is to increase the equilibrium population which is to increase the sum total of human misery.

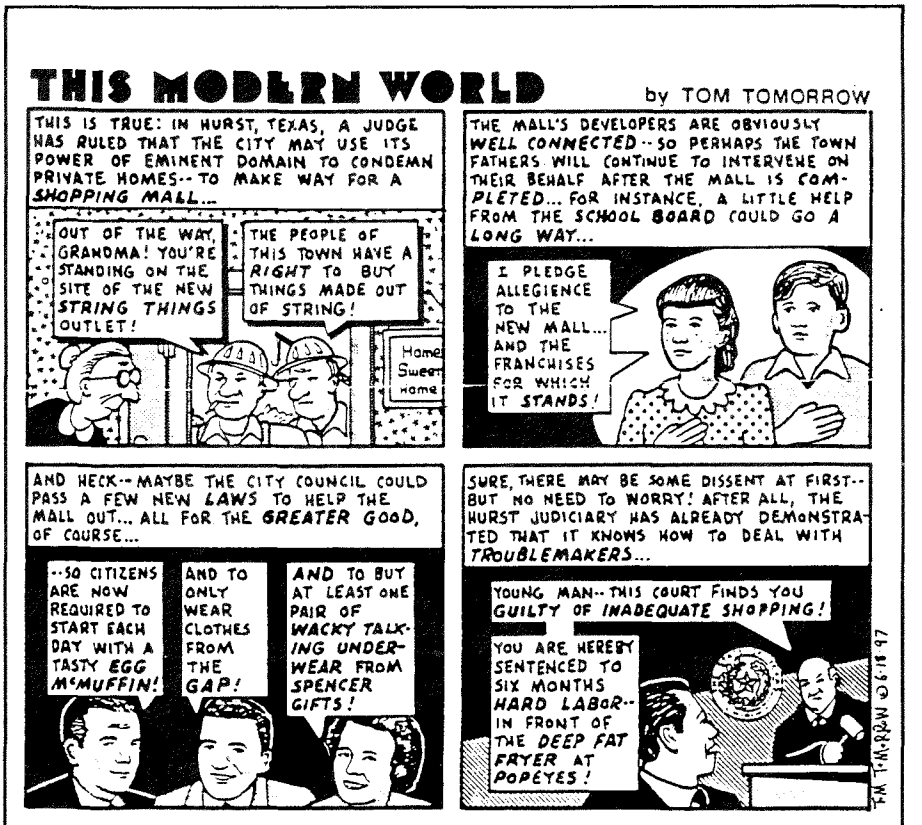
Third Theorem: The Moderately Cheerful Form of the Dismal Theorem

Fortunately it is not too difficult to restate the Dismal Theorem in a moderately cheerful form, which states that if something else, other than misery and starvation, can be found which will keep a prosperous population in check, the population does not have to grow until it is miserable and starves, and it can be stably prosperous.

Boulding continued:

Until we know more, the Cheerful Theorem remains a question mark. Misery we know will do the trick. This is the only sure-fire automatic method of bringing population to an equilibrium. Other things may do it.

Boulding did not try to marginalize the Malthusian


THIS MODERN WORLD
by TOM TOMORROW
THIS IS TRUE: IN HURST, TEXAS, A JUDGE HAS RULED THAT THE CITY MAY USE ITS POWER OF EMINENT DOMAIN TO CONDEMN PRIVATE HOMES--TO MAKE WAY FOR A SHOPPING MALL...
OUT OF THE WAY, GRANDMA! YOU'RE STANDING ON THE SITE OF THE NEW STRING THINGS OUTLET!
THE PEOPLE OF THIS TOWN HAVE A RIGHT TO BUY THINGS MADE OUT OF STRING!
Home Sweet Home
THE MALL'S DEVELOPERS ARE OBVIOUSLY WELL CONNECTED--SO PERHAPS THE TOWN FATHERS WILL CONTINUE TO INTERVENE ON THEIR BEHALF AFTER THE MALL IS COMPLETED... FOR INSTANCE, A LITTLE HELP FROM THE SCHOOL BOARD COULD GO A LONG WAY...
I PLEDGE ALLEGIENCE TO THE NEW MALL... AND THE FRANCHISES FOR WHICH IT STANDS!
AND HECK--MAYBE THE CITY COUNCIL COULD PASS A FEW NEW LAWS TO HELP THE MALL OUT... ALL FOR THE GREATER GOOD, OF COURSE...
--SO CITIZENS ARE NOW REQUIRED TO START EACH DAY WITH A TASTY EGG McMUFFIN!
AND TO ONLY WEAR CLOTHES FROM THE GAP!
AND TO BUY AT LEAST ONE PAIR OF WACKY TALKING UNDERWEAR FROM SPENCER GIFTS!
SURE, THERE MAY BE SOME DISSENT AT FIRST--BUT NO NEED TO WORRY! AFTER ALL, THE HURST JUDICIARY HAS ALREADY DEMONSTRATED THAT IT KNOWS HOW TO DEAL WITH TROUBLEMAKERS...
YOUNG MAN--THIS COURT FINDS YOU GUILTY OF INADEQUATE SHOPPING!
YOU ARE HEREBY SENTENCED TO SIX MONTHS HARD LABOR--IN FRONT OF THE DEEP FAT FRYER AT POPEYES!
TOMORROW 6/18/97

© 1997. Tom Tomorrow. Reprinted by permission.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

message. He addressed the question with candor and courage which seem to be largely lacking from much contemporary discussion of the population-related problems that are overwhelming us.

Why Continue the Growth?

Instead of accepting the assertion of the **non-believers** that growth is both good and inevitable, we should instead focus on the question of *why* should we have more population growth. This is nicely framed in the challenge:

Can you think of any problem,
on any scale,
from microscopic to global,
whose *long-term* solution
is in any *demonstrable* way,
aided, assisted, or advanced,
by having larger populations —
at the local level,
the state level,
the national level,
or globally?

Conclusion

There seems to be a concerted effort, locally, nationally, and globally to marginalize the modern Malthusian message and to talk about sustainability so as not to offend anyone. This marginalization requires that we make no mention of the facts that:

At all levels, sustainability requires the cessation of population growth and of growth in the rate of consumption of resources, and

We have a serious population problem in the United States.

As the issue of sustainability becomes more prominent and critical, major efforts are being made to obfuscate and to draw attention away from the central message that population growth cannot be sustained. It has been thus ever since Malthus published his essays:

> *It is revealing that many literary people in the nineteenth century were also anti-Malthusians — revealing, because it demonstrates how deeply Malthus' message offended humanitarian values. "The voice of objective reason," Keynes said of Malthus' theory, "had been raised against a deep instinct which the evolutionary struggle had been implanting from the commencement of life..." That same voice spoke against the religious command to "increase and multiply;" and, despite Malthus' protestations from 1803 on, his doctrine was also held by socialists and other radical reformers to be an immovable obstacle to any human action for social betterment. It was no wonder, then, that nineteenth-century writers, characteristically thinking of themselves as humanitarians, resisted the Malthusian propositions... "Malthusianism" is still ritualistically denounced* (Appleman 1976).

ADDENDUM

The *Brundtland Report* used vague and contradictory language in its advocacy and explanations of the new concept of sustainable development. In so doing, the *Report* led the way in the marginalization of the Malthusian message. In contrast, more recently, Gro Harlem Brundtland, the Prime Minister of Norway, has spoken strongly about the urgency of dealing with population growth as Malthus did, by looking at the numbers. Speaking at the Rio conference in 1991 she "urged immediate steps to address population growth:"

> Poverty, environment and population size can no longer be dealt with, or even thought of, as separate issues. (M. Holloway, *Scientific American*, September 1992, p.32).

In her commencement address at Harvard in 1992, Brundtland said:

> Technological trends, patterns of production and human consumption — and *pure human numbers* — call for radical changes in order to reconcile human activities with the laws of nature (emphasis added). I have been stunned to see how the Rio conference seems to fail to make workable decisions on how to curb population growth (*Harvard Magazine*, July/August 1992, p.48).

In literature of an international population group, the Norwegian Prime Minister is quoted as saying:

> Rapidly expanding population effectively strangles most efforts to provide adequate education, nutrition, health care, and shelter (March 1998 mailing from Population Communications International, 777 UN Plaza, NYC, 10017-3521).

The Holloway article also quotes Henry Kendall of the Union of Concerned Scientists:

> People who take issue with control of population do not understand that if it is not done in a graceful way, nature will do it in a brutal fashion.

TSC

REFERENCES

Abernethy, V., (1998), *Population & Environment*, Vol. 19, # 3, January 1998, p.289.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Appleman, P., (1976) *An Essay on the Principles of Population* by Thomas Robert Malthus. Text, Sources, and Background Criticism Edited by P. Appleman, W.W. Norton & Co., New York, 1976.

Audubon, National Society, (1998) *Population & Habitat Update.* Vol. 10, No. 1, January/February, p.6.

Bartlett, A.A., (1978), "Forgotten Fundamentals of the Energy Crisis," *American Journal of Physics,* Vol. 46, September 1978, pp. 876-888.

Bartlett, A.A., (1980), "Let's Not Continue to Ignore Boundary Conditions," *Journal of College Science Teaching,* Vol. 9, January 1980, p.134.

Bartlett, A.A., (1994), "Reflections on Sustainability, Population Growth, and the Environment," *Population & Environment,* Vol. 16, No. 1, September 1994, pp. 5-35.

Bartlett, A.A., (1996), "The Exponential Function, XI: The New Flat Earth Society," *The Physics Teacher,* Vol. 34, September 1996, pp. 342-343. (Ten earlier articles on The Exponential Function have been published in *The Physics Teacher* since 1976.)

Bartlett, A.A., (1997), "Is There a Population Problem?" *Wild Earth,* Vol. 7, No. 3, Fall 1997, pp. 88-90.

Bartlett, A.A. & Lytwak, E.P., (1995), "Zero Growth of the Population of the United States," *Population & Environment,* Vol. 16, No. 5, May 1995, pp. 415-428.

Boulding, K., (1971) *Collected Papers,* Vol. II, pp. 137-142. Foreword to T.R. Malthus, *Population, The First Essay,* Colorado Associated University Press, Boulder.

Brundtland, G.H., (1987) *Our Common Future,* World Commission on Environment and Development, Oxford University Press, 1987.

Committee for the National Institute for the Environment, (1993) *Proposal for a National Institute for the Environment.* Washington, D.C., Sept. 1993.

Draft Principles (1996) "Draft Principles of Sustainability," Boulder County Healthy Communities Initiative, October 1996. UCAR, Box 3000, Boulder, CO, 80307.

EPA (1993) *Sustainable Development and the Environmental Protection Agency, Report to the Congress,* EPA 230-R-93-005, June 1993, p. 2. The EPA report attributes this statement to Governor Bill Clinton and Senator Al Gore.

Putting People First: How We Can All Change America, Times Books, New York City, 1992, pp. 94-95.

FAIR (The Federation for American Immigration Reform) (1997), *Immigration Report,* Vol 17, No. 10, December 1997, p.6.

Forbes, M.S., Jr., (1992) "Fact and Comment" (Editorial), *Forbes Magazine,* June 8, 1992, p. 25.

Jacobsen, J. (1997), "Getting it Right: A Policy Agenda for Local Population Activists," The Wirth Chair in Environmental and Community Development Policy, Discussion Paper #1, Graduate School of Public Affairs, University of Colorado at Denver, 80202.

Kemp, J., (1992) quoted in *High Country News,* (Paonia, CO), Jan. 27, 1992, p. 4.

May, R.M., (1993) *The End of Biological History?,* A book review in *Scientific American,* March 1993, pp. 146-149.

PAI (1996), "Why Population Matters," Population Action International, 1120 19th St, NW, # 550, Washington, D.C., 20036.

President's Council (1996), "Sustainable America: A New Consensus," President's Council on Sustainable Development, 730 Jackson Place, Washington, D.C., 20503.

Simon, J., (1995) *Cato Policy Report,* The State of Humanity: Steadily Improving, Vol. 17, No. 5, p. 131, September/October 1995. (The Cato Institute in Washington, D.C. is a think tank that advises government leaders on policy questions.)

Sitarz, D., Editor, (1993) *Agenda 21; The Earth Summit Strategy to Save our Planet,* Earth Press, Boulder, CO, 1993.

Task Force (1996) "Population and Consumption: Task Force Report" President's Council on Sustainable Development, 730 Jackson Place, NW, Washington, D.C., 20503.

Wattenberg, B.J., (1997) Boulder *Daily Camera,* Nov. 30, 1997. This editorial piece was reprinted from the *New York Times Magazine,* Nov. 23, 1997.

Wilson, E.O., (1995), From "The Diversity of Life," quoted in *The Social Contract,* Fall 1995, p. 65.

ZPG (Zero Population Growth) (1996a) The old statement of principle last appeared in *The ZPG Reporter,* March/April 1996.

ZPG (1996b) The new statement of principle first appeared in *The ZPG Reporter,* May/June 1996.

ZPG (1998) ZPG Policy Statement on U.S. Immigration, *The ZPG Reporter,* Vol. 30, # 1, February 1998, p. 2.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

The Evolution of Social Capital

On the origins of the social contract

by Katharine Betts

Evolutionary science offers a general explanation for the origins of human beings, but what of the origins of human society? Is there any general theory to explain how society began? The great theorists of the social contract, Thomas Hobbes, John Locke and Jean-Jacques Rousseau, provide us with accounts which, though they differ in a number of important respects, all rest on the theory that at some stage in the past isolated individuals met and decided to form a society. We were once alone, solitary and living in a state of nature, but at some specific juncture, we came together and entered into a social contract with other people.

If we take Locke's version of this story of the origins of society, it is evident that it was devised as a justification for the second English revolution of 1688. He wanted to show that the sovereign, James II, had violated the terms of the social contract and that the people therefore had a right to dissolve his government. Locke's work became a key source of argument for the American revolution nearly 100 years later, and shortly after, for the French revolution. His account of the social contract was clear and influential. But it is wrong.

If to exist in a state of nature is to exist without society, we know that people never were in such a condition. The long dependence of the human infant requires, at least, a society of two — care giver and child. This society must endure for ten to twenty years and in most cases it is larger than two. Successful human reproduction requires the successful maintenance of human societies. For anatomically modern humans, and doubtless for our hominid ancestors as well, there can never have been a state of nature before society. We are social creatures and we evolved with society. But how could this begin?

Katharine Betts, Ph.D., *teaches at Swinburne University of Technology, Australia. The author of* Ideology and Immigration *(Melbourne University press, 1988), Dr. Betts is a specialist on Australian immigration, population and multiculturalism matters. Her e-mail address is kbetts@swin.edu.au.*

Selfish genes and spontaneous cooperation

Evolutionary theory is based on the idea of self-interested competition. Some evolutionary theorists have thought that this competition takes place between groups and others that it is competition between individuals. The current theory, popularized by Richard Dawkins in *The Selfish Gene,* is that it is the genes themselves which lock horns in the struggle to survive.[1] Usually the implicitly selfish orientation of the genes leads to overtly selfish behavior on the part of the individuals who carry them. This is because individuals (microbes, plants, animals, people) which look after their own interests are more likely to propagate their genetic material than individuals which do not.

How could a cooperative society emerge from the chaotic self-interested striving of the most minute particles of living matter? We could argue that individuals who become part of cooperating groups may have better reproductive success than those who do not, but it is hard to see how cooperative behavior could ever have become established. Individuals who paused to help others would have less time and energy to look after their own concerns and would thus lose out to those who were more single minded in their self-interest.[2] Mutual cooperation may be mutually beneficial but it is hard to see how it can get started. If a would-be cooperator offers a favor to an individual programmed by selfish genes (as all living things

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

must be), the creature who receives the favor should just take it and run.

If societies did not come into being as the result of an original binding agreement between previously scattered individuals, how was it that they emerged at all? This is another way of stating the problem of collective action. How can the best outcomes for a group of individuals be achieved when the collective interests of the group and the individual's interests conflict?[3]

We should start the search for an answer by focusing on cooperation rather than altruism. It is by no means axiomatic that cooperation is always, or even mostly, unselfish and altruistic in the sense of having detrimental consequences for an individual's personal (and genetic) interests.[4] It is true that, on some occasions, commitment to group projects may require terrible individual sacrifices but in most cases cooperation pays. While evolutionary, and social, theorists should acknowledge the possibility of individuals exhibiting genuine heroism and self-sacrifice (even if it means a feckless disregard for their genetic posterity),[5] here we can set our sights on the lower target of simple cooperation. For present purposes *cooperation* is not a synonym for altruism, it is just cooperation. And its opposite is not selfishness but just *non-cooperation.*

"We need to understand how ... cooperative behavior between selfish individuals can evolve."

Economics and social capital

Moralists, whether they work from Darwinism or from Christian notions of original sin, usually assume that we are born selfish and must be trained rigorously if we are to stifle our innate preference for criminal egotism. The picture of our innate human nature from this perspective looks bleak, but it need not be painted entirely in black. It is an evolutionary truism that the genes which replicate themselves live in bodies which take care that they should do so. We can hold on to this and still see how individual interests can flourish within cooperating groups.

There is, of course, one well-developed model of human behavior which argues that individual selfishness promotes the common good, and that is market economics. Economists are keen to point out that self-interest, regulated by competition, can generate complex systems of behavior which organize the factors of production (land, labor and economic capital) in such a way as to produce and distribute wealth for the wider good. It is not, said Adam Smith, from my butcher's benevolence that I expect my dinner, but from his self-interest.

But Smith's insight does not take us far enough. We still do not know how societies developed to the point where money and markets became possible. And the combination of the factors of production with egocentric greed can only explain part of the variability between different nations. This is because economics provides a limited vision of the relations among people and between people and their land. The invisible hand of the market can regulate the production of marketable goods and direct their distribution, but it can also squander natural capital (such as plants, animals, clean air and water, mineral resources, and the capacity to absorb wastes) and, as contemporary, global "casino capitalism" demonstrates,[6] it can denude social capital.

Social capital is important. The term has been newly-coined by political analysts but, now that they have named it, most of us can recognize it. *Social capital* stands for the bonds of trust and obligation between human beings which allow non-coercive cooperation.[7] Without it, there is no social foundation for any economy, market or otherwise, and no common resources to draw on to protect the natural environment. Smith did not take it into account in *The Wealth of Nations* but Matt Ridley argues that his earlier work, the *Theory of Moral Sentiments,* may be central to our understanding of it.[8]

We need to understand how societies can develop without any overt plans or conscious organization, how cooperative behavior between selfish individuals can evolve. If we do, we will know more about the origins of social capital and how our remote ancestors could have used it to solve the problem of collective action.

Game theory and the problem of collective action

Work done by modern game theorists on the ancient problem now known as *prisoner's dilemma*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

provides a new key to the problem of collective action. It can help us imagine how cooperating social groups might have emerged from a pre-human Hobbesian war of all against all. It is not surprising that game theorists conclude that, over the long term, individuals do better if they are part of cooperating groups, and that they do not need to know this fact for it to be true. The interesting part is that these theorists can also show how such groups can spontaneously come together in the first place. But to understand the story we need to grasp the structure of the prisoner's dilemma.

Many social transactions which underpin cooperation involve bargaining. You do this for me and I'll do that for you. There is nothing unselfish about this. However, unless the favors can be evaluated at their face value and exchanged on the spot, there is always the possibility that one of the partners will pocket his gains and renege on the obligation to reciprocate. They will not only fail to cooperate, they will defect. The prisoner's dilemma is an archetypical situation where two people could each either honor their promises to each other to cooperate or defect on their obligations. Darwin used the phrase *natural selection* to emphasize the absence of deliberate intentions in the origins of species. The social organization which now allows humans to make plans and sign binding contracts had to begin among pre-human creatures who were probably incapable of forming long-term goals.

The dilemma is this. The attempts of the two individuals to cooperate and honor their promises (implicit or explicit) are risky. This is because cooperation requires a partner if it is to be successful while defection is unilateral. If a situation mirrors that of the prisoner's dilemma, the rewards for the individual depend on what the partner does. Mutual cooperation is hard to ensure but it would suit the individual well. However, the best possible outcome for the individual in any one encounter is that he or she exploits the partner's trust and defects while the partner who has been betrayed cooperates. (The books robustly declare that, in this situation, the betrayed partner has earned the "sucker's payoff".) If, however, the partner anticipates treachery and defects as well, neither do very well. They would both have been better off cooperating. The worst situation for the individual is that he or she cooperates but is deceived. The dilemma is this: if you attempt to cooperate you may do quite well but you run the risk of being betrayed and failing bitterly. In contrast, if you defect you may do very well indeed and you only run the risk of moderate failure.

"The social organization which now allows humans to make plans and sign binding contracts had to begin among pre-human creatures who were probably incapable of forming long-term goals."

The logic of the situation was first developed to analyze the options facing a pair of prisoners, each of whom would benefit if he or she confessed (defected) and implicated the other. This is because the defector would go free while the betrayed confederate would serve a substantial sentence. If neither confessed they would both serve short sentences, and if both confessed they would both serve moderate sentences. The tension lies in the fact that the best common outcome (neither defect, both cooperate) is not as good for either individual as is unilateral betrayal.

The literature usually assumes the prisoners are criminals. (Possibly the moral dimensions of their problem would become clearer if we assumed they were green activists imprisoned for their noble deeds by a tyrannical regime, hell-bent on environmental destruction.) For convenience we will call them Peter and Jane. They are put in separate cells and urged to confess. They had worked as a cooperating partnership before, but now they cannot communicate. Will the partnership endure in the face of the temptation to betray? If one confesses but the other does not, the defector will go free while the person who is betrayed gets a 20-year sentence. If both confess, both get 16 years. If neither confesses, both get eight years.

The same logic applies to each of them, but if we look at the situation from Peter's point of view we

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

can see that his best outcome would be that he confesses while Jane does not. Failing that, his next best outcome would be that he refuses to confess and so does Jane. But if he adopts that strategy he risks the worst outcome for himself which is that he refuses to confess and Jane betrays him. She defects and goes free, leaving him to serve the 20 years.

Because this is game theory, the participants are often called players and, as each player can either defect or cooperate, there are four possible outcomes. Table 1 shows the sentences applying in each. It also assigns a points score to these outcomes which allows us to generalize from this situation to similar problems of collective action which do not involve jails and criminals.

Table 1
Prisoner's dilemma: four possible sets of outcomes

1. *Best joint outcome* Both cooperate. Jane gets 8 years and scores 3 points; Peter gets 8 years and scores 3 points.	3. *Best outcome of all for Jane*, worst for Peter. Jane defects and goes free; Peter cooperates, gets 20 years, and scores 0 points.
2. Jane cooperates, gets 20 years, and scores 0 points. Peter defects, goes free, and scores 5 points.	4. *Second-best joint outcome*. Both defect. Jane gets 16 years and scores one point; Peter gets 16 years and scores one point.

While it only represents a "com-munity" of two, the prisoner's dilemma offers a way of analyzing a situation where there is conflict between an individual's immediate self interest and the community's broader collective interests. Quadrant 1 in the table shows that cooperation yields the highest collective score (6), while unilateral defection in either Quadrant 2 or 3 offers the highest possible individual score (5).

The logic of the dilemma may be easier to understand in the more familiar situation of bargaining in the market place. Peter is selling a second-hand car and Jane is paying for it by check. On-the-spot examination cannot reveal whether the car is really a good car or whether the check is really a good check. Peter's best outcome is that he sells a worthless car and Jane gives him a good check. (He's the defector, Jane wants to be a cooperator but, sad to say, is taken for a fool.) Peter's next-best outcome is that he sells a good car and gets a good check. (They both cooperate.) Next best, for Peter, is that he sells a bad car and Jane gives him a bad check. (They both defect.) Worst of all, for Peter, is that he sells a good car and gets a worthless check. He wanted to be a cooperator but ended up betrayed. However, the best situation for the community of Peter and Jane together is the second one, that of mutual cooperation.

What of the past? Could such dilemmas have confronted our ancestors before checking accounts and complex consumer goods were devised? Biologists have shown that a variety of creatures (fish, birds, vampire bats) face problems of prisoner's dilemma,[10] so there is no reason to exempt pre-humans. If one hominid has an extra spear to barter and another has an extra axe, they can each evaluate the soundness of the other's offering there and then and make an exchange without further ado. The problem arises when promises of future behavior are involved. Perhaps they wish to enter into an arrangement to share the risks of failing to catch any game. (Those with strong stomachs can see how the vampire bats manage such arrangements today.)[11] The hunters could each search for game in different parts of the forest and implicitly agree to share their catch in the evening. This will maximize the odds that one of them will at least catch something. But defection is possible. One of the hunters could indeed snare a small animal but he could eat it on the spot. Full of assumed disappointment he returns in the evening empty-handed. He has nothing to put into the common pot, but the faithful partner honors his side of the agreement and divides his own catch with his well-fed and treacherous associate. But if both cooperate, they can truly spread the risks of hunting, while if both defect they will sometimes eat well but will often have to endure hunger.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Multiple players, the commons, and the free-rider

Many situations where mutual co-operation is the best collective outcome but unilateral defection offers a higher individual payoff involve more than two people. For example, Garrett Hardin's unmanaged commons[12] is a variant of prisoner's dilemma, but with multiple players. Any one herder's best interest would be served if he alone ran his herd on the commons while everyone else refrained. (He "defects," they "cooperate" and are thoroughly taken down.) The individual herder's next-best option would be full cooperation; no one grazes his cattle on the commons or, more realistically, limited grazing is shared equally. (This, of course, would be the best outcome for the community of herders and the commons would cease to be unmanaged.) Next best from the individual's point of view is that everyone runs his cattle to the limit — everyone "defects." The individual at least gets something before the final disaster hits. The worst outcome, from the point of view of the individual, would be that everyone else runs his cattle except him. He had hoped to play the role of cooperator but ended up being taken for a fool.

"Without some rudimentary society to produce and nurture basic social skills, no meeting and discussion would have been possible."

We can imagine other variants. One person, decides not to drive a car in the hope of reducing pollution and congestion. He hopes to play the role of "cooperator" but risks putting valuable personal resources into alternatives (cycling or walking if there is no public transportation) while others speed past, enveloping him in exhaust fumes. Another person limits her family to one or two children. Another spends a lot of time sorting the garbage for recycling. Whether they are idealistic simpletons or useful leaders of a new trend depends on what other people do. The dilemma involving attempts at cooperation risks being met by ruthless exploitation can work at a national level too. One country invests in reducing carbon-dioxide emissions, others go on as usual or even produce more. One country restrains its fishing fleet, others move in and increase their catch. One country avoids nuclear industries, others dump radioactive waste at sea. One country cuts its birth rate, others do not. Some of these defectors may even demand that the lower-birth-rate countries accept their surplus population. In each case the defecting countries "win," leaving others with the fool's payoff and the world as a whole loses.

The free-rider problem is a slightly different form of the problem of collective action.[13] For example, Helen and Jim do not wish to have their child vaccinated against whooping cough. They are afraid that the vaccine might have side effects. They reason that every one else will have their children vaccinated, so the likelihood of whooping cough being spread is small. If the other parents cooperate, and Helen and Jim defect, they (or, rather, their child) can gain a free ride at the expense of others. But if most other parents plan the same defection, the situation will be similar to "all defect" in prisoner's dilemma and there will be a lot of infants, and doubtless many parents, all crammed into Quadrant 4 of Table 1 and all sharing a new whooping cough epidemic. There is, however, a difference between the free-rider dilemma and the prisoner's dilemma. Helen and Jim might prefer to be the one-and-only family of defectors, but they would be better off as unilateral cooperators (having their child vaccinated even though no-one else's child was) than they would be in the situation where no-one gets their children vaccinated. There's no "sucker's pay off" for being a unilateral cooperator, just a mild reaction to a vaccine in return for immunity to a disease that has everyone else in its grip. From the individual's point of view, it can be important to work out whether a particular problem of collective action is a prisoner's-dilemma problem or a free-rider problem. But from the community perspective, everyone having their children vaccinated (everyone happy and secure in Quadrant 1), is still the best joint outcome, and free-riders pose a threat to the common good in the same way that defectors do.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

The importance of continuity, history and memory

Do people (and countries) who behave well always risk being exploited if a situation has a prisoner's-dilemma structure? If they do, solving the problem of collective action must always mean talking with other "players" and enforcing mutually-agreed rules, establishing the kind of social contract Locke imagined. But if this is true, we are left with the insoluble problem of how human beings ever developed the language and ideas which they would have needed in order to hold their first meeting and set their ground rules. Without some rudimentary society to produce and nurture these basic social skills, no meeting and discussion would have been possible. A pre-Lockean society could only have arisen spontaneously, but the prisoner's dilemma seems to render such spontaneous cooperation impossible because it seems to show that defection is always a better risk than cooperation.

"Moral values rewarding cooperation and punishing defection are more likely to emerge and survive in stable communities where people know each other..."

When the mathematicians first began working on the problem in the early 1950s, this was the depressing conclusion which they reached.[14] But it turned out to be true only if we take it one game at a time. The outcome is different if we look at repeated or "iterative" games. As computers developed and mathematicians used them to try different approaches to the problem, the results changed. We can now see that it is possible for cooperating groups to emerge spontaneously (if they are small and if the individuals involved know each other well).

The importance of continuity seems clear from our own experience. If Peter only intends to sell one car, and if he expects he will never see Jane again, it is in his interest to pass off one that is worthless. But if he is starting a second-hand car business and hopes to build up a loyal clientele the situation changes. In a similar way, if the hunter wishes to have an enduring partnership it is in his interest, not only to cooperate, but to demonstrate to his potential collaborator that this indeed is what he will do. It is in his interest to show that he is trustworthy, a pre-human who keeps his implicit promises, a collaborator worth taking into partnership. Moral values rewarding cooperation and punishing defection are more likely to emerge and survive in stable communities where people know each other and most "games," or interactions, are iterative.[15] While we know this from our own experience, it is important to show how it is that selfish, unreflecting, pre-human entities could implicitly arrive at this conclusion for themselves. Computer simulations can now demonstrate that we are right to believe that keeping promises within small communities offers higher rewards than treachery and defection. But how can this be explained in a Darwinian world where selfishness should rule?

Matt Ridley's book, *The Origins of Virtue*, provides a lively account of the computer-based research which has been done on the problem: my discussion of it is drawn from him.[16] The simulations he describes show that in one-off games of prisoner's dilemma, defection always pays (the defector may score 5, but is certain of scoring at least 1 and of avoiding zero). But in repeated games this certain victory evaporates. Continual defection can turn out to be a losing strategy. Tournaments of prisoner's dilemma have been played out in which individual programs designed by different programmers play against each other, scoring points for defection and cooperation according to the logic of the game. (The points normally allocated are those set out in Table 1.) With this scoring system, programs with different strategies can accumulate points and the robustness of each strategy be tested. For example, a program which is set up in such a way that it will always defect will do well against programs set up to always cooperate, because it will routinely score 5 to the other's 0. Soon, however, the strategies which always cooperate will be driven from the field defeated. (Think of the points as food. On a continual diet of zeros the program which always cooperates will starve to death. In contrast the well-fed can survive and, if they were really living creatures, propagate their kind.) But after the

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

habitual cooperators have been exploited to the point of extinction, the strategies which always defect will only meet others of their own ilk. Their days of plenty will be over because now they will only score 1 point in each encounter.

As the tournament continues, program competes with program, sometimes using cooperation as a strategy and sometimes defection, and electronic circuits hum with artificial life. But the results are easier to visualize if we pretend that the programs are real creatures, perhaps rather limited human beings. Here we are, a collection of strangers meeting for the first time in a field of opportunities where we can make promises about future cooperation, and then honor them or not as we please. If a person meets a particular stranger only once and can then move on to a different field in a foreign country, the hit-and run-strategy of Always Defect will always pay. The defector may score 5 if the stranger is naive, but the worst he will get is 1. Not for him the humiliation and impoverishment of attempts at cooperation which are exploited and fail; as a callous opportunist the defector is bound to keep on winning. But what strategy works out best if no one can move on? What happens if we are all going to stay in the same field and have a series of encounters with its other inhabitants?

The best long-term strategy would be "always cooperate, so long as the other person is also a cooperator." Such a strategy would mean that we would consistently score 3, and so would our partners, and that there would be no losers. If we could only ensure this outcome, we could all stay safely in Quadrant 1. But how can we know if another person is playing the same way? He may make promises of cooperation but why should we believe him? Many people with different strategies populate this field; some are trustworthy cooperators, some are predatory defectors. Others have variable strategies; sometimes they defect, sometimes they cooperate. How do we know what they will do to us? How should we behave toward them? As potential partners come together they can promise and cooperate, or they can meet and cheat. After many encounters the *deus ex machina* (or programmer) says "enough" and counts the score, asking not which group or team has won, but which individual (or which program). Who in this game of life won the most points and acquired the potential to leave the most descendants?

Initial research showed that the winner was a simple, variable program: the tit-for-tat strategy. Tit-for-tat begins every encounter as a cooperator but afterward always responds in the same way as its partner. It rewards cooperation with cooperation and defection with defection. This set of rules — start by being nice but then give back what you get — seemed to defeat all comers. The implication drawn has been that, given enough time, all the other strategies would perish from lack of points and the field would be totally populated by cheerful tit-for-tatters. These simulations seemed to show how it was that voluntary cooperation could spontaneously evolve in a selfish world. Not only would a creature which played tit-for-tat survive and prosper, it would also leave more descendants than others which were less well-behaved. And assuming that its strategies were passed on to its progeny (either culturally or genetically), its kind would become widespread.

"...some are trustworthy cooperators; some are predatory defectors....How do we know what they will do to us? How should we behave toward them?"

Some commentators then considered the prisoner's dilemma solved, but others were less happy. As a model for real life it was unsatisfactory. Suppose one tit-for-tat strategy meets another? This should be the beginning of a happy life-time of mutually rewarding cooperation. But suppose the second strategy makes a random mistake. It once, and only once, fails to meet its obligations and, because of this error, replies to cooperation with defection. Its partner then flips over to a retaliatory stance and defects in its turn. A lethal feud ensues. Because of one error, both are grievously impoverished.

In the face of this problem, refinements were introduced. A new program called "Generous" was introduced. Generous played tit-for-tat except that, occasionally and randomly, it responded to defection

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

with cooperation. This allowed the program the chance of escaping from dreadful feuds which had only been instigated by mistake. Generous proved to be a great success, more robust than the original tit-for-tat. Other refinements produced programs with memories, strings of computer code which could recall the behavior of other chance-met strings of code. The programs became more human-like, and each program could draw on its recollections of the behavior of other programs. For example, Generous could learn to recognize other Generous programs and begin each new encounter with cooperation. Generous could also, being forewarned, avoid giving others with a known history of defection the benefit of the doubt. But these memory-enhanced programs achieved their best results when they could be selective. A new strategy, the Discriminating Cooperator, was developed.[18] This program did not greet Always Defect with defection. Discriminating Cooperator ostracized it. Indeed, Discriminating Cooperator refused to play with any other program which did not have a known history of reliable cooperation. In this way opportunists who always, often or sometimes defected could be isolated. Because of this, unreliable opportunists could now only play with each other. Routinely breaking their agreements for meager rewards, they battered one another other down in the ill-rewarded badlands on the edge of the field, while the circle of virtuous and trustworthy cooperators prospered at the center.

The creation of Discriminating Cooperator might seem like a happy ending to the story of virtual life behind the screen. But as the Discriminating Cooperator programs proliferated, driving out the defectors, a more naive type of program, Always Cooperate, grew in strength among them. After all, Discriminating Cooperator would not defect on Always Cooperate so why should Always Cooperate not prosper too? The two strategies continued to interact amiably and profitably but, slowly, Always Cooperate gained in numbers. All would have been well were it not for the risk that, at some point, a remnant member of the Always Defect gang would return from the fringe and, rather than meeting the firm but fair response of Discriminating Cooperator, it could encounter the naive optimist, foolish Always Cooperate. Inasmuch as these simpletons had increased in numbers, the Always Defect gangsters would make large inroads. (Even if Discriminating Cooperator had built walls to keep the bad programs out, mutation would mean that, from time to time, one or two of them would appear wolf-like in the midst of the circle of cooperators.) Each time they reappear the newly-arrived crew of Always Defect rules for a while, preying on Always Cooperate, until the defectors are once again reduced by the steady attrition of Discriminating Cooperator discovering them and isolating them.

If we bring our human interpretations to this shadowy artificial world, we can see the Always Cooperate strategy as a free rider. It "wants to be nice" and is able to do so by exploiting the benign environment produced by the more tough-minded Discriminating Cooperator. As long as the Always Cooperate programs are protected from villainy, they can enjoy their niceness. But once evil reappears among them, the curtain comes down on the pleasant fable of universal cooperation which they have been telling to each other.

From artificial life to human societies

These simulations show how cooperative behavior can emerge between very limited creatures, and how a little memory goes a long way in solving the problem of collective action. But there is no final ending, happy or otherwise, in these computer simulations — only a continual oscillation. Does this situation mirror contemporary human interactions? It may. But the size of the cooperating group and the permeability of its boundaries matter.

Ridley emphasizes the importance of numbers,[19] and it is a point that Hardin's analysis of Hutterite communities, in a different context, makes.[20] Around about 150 people seems to be the optimal size if we want each member of a social group to know the others well and thus, through social pressure backed by the threat of ostracism, reinforce the norm of cooperation. (Indeed Aristotle made the same point in the fourth century B.C. when he argued that the ideal state should not be so large that its citizens could not know each other.)[21] Robin Dunbar's research provides more detail. He endorses the finding that 150 is the approximate limit to the number of other people whom we can know well, but also argues that the maximum number whom we can know to the point of feeling deep personal empathy toward them is around 14 while, on average, we can recall around 1500 to 2000 faces.[22]

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

The uneasy relationship between discriminating and undiscriminating cooperators and anti-social predators modeled by the game theorists may be applicable to societies of many millions, but the basic principle of spontaneous mutual aid which they outline cannot apply to large groups. When societies are so large that we cannot hope to know more than a fraction of the members personally, all that game theory can suggest is that defection is more likely and, by implication, that the need for overt rules is more pressing.

It is not just that large groups contain too many people for us to recognize. Social interaction within them also becomes very much more complex. Thomas Malthus is rightly famous for arguing that human numbers can grow geometrically while resources, if they grow at all, can *not* grow geometrically. His argument is focused on the pressure of population on natural re-sources. But could exponential growth also threaten social capital? Of course, as competition for natural resources becomes more acute, we would expect social conflict to increase. But do the numbers themselves make a difference to our capacity to manage conflict?

"[Malthus'] argument is focused on the pressure of population on natural resources. But could exponential growth also threaten social capital?"

Jared Diamond's research shows that social capital is strained by growth, irrespective of the pressure on natural capital. This because as a population grows the potential number of encounters which an individual may have with other individuals grows at even faster rate. A group of two people contains only one possible dyad, a group of three contains three, a group of four contains six, a group of five contains nine, and a group of six contains 15. As Diamond puts it:

> *Relationships within a band of 20 people involve only 190 two-person interactions (20 people times 19 divided by 2), but a band of 2,000 would have 1,999,000 dyads. Each of those dyads represents a potential time bomb that could explode in a murderous argument...*[23]

And one-to-one encounters are far from being the only form which social relations take. If large groups are to survive they need rules and they need specialists with power to enforce them.

But why should a small group become a larger one? While natural increase alone can produce growth in the size of any one group, a group which grew too large could always bifurcate, as indeed the Hutterite groups do. Diamond argues that the threat of war is the principle cause of the development of larger groups. Such threats either foster defensive mergers between allies or, through conquest, force mergers between enemies. Either way, conflict results in numerous smaller groups becoming fewer larger ones, and it is this, he claims, which leads small bands to give way to larger tribes and then to chiefdoms and then to states.[24]

Lessons from game theory for social capital

Trust and obligation between known individuals can explain cooperation in small groups. However, these values cannot alone provide a basis for larger numbers of human beings to live in a helpful and cooperative way. They cannot by themselves support the modern nation state and they certainly cannot provide a basis for a world without borders, based on universal sharing and cooperation. But the game theorists have shown how cooperative behavior can evolve among groups of self-interested individuals and how the problem of collective action can promote a desire to be known as trustworthy. This a good beginning. Social theorists less interested in evolution and more concerned with the problems of contemporary societies coined the term *social capital* to describe these very feelings of mutual trust and obligation, arguing that this social capital consists of networks supported by these values. It is built on a predisposition to trust other people and a sense of obligation to behave as someone who may be safely trusted by others. Here game theory, evolution and political analysis meet.

The task now is to preserve the social virtues in a world where numbers of human beings and the complexity of human affairs threaten natural and social capital. Apart from the direct effects of growing human numbers, both types of capital have

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

two enemies: people and groups who defect, and the naive who are prepared to cooperate with anyone, even habitual defectors.

As human beings we are not prisoners of our genes and we are not bound by the limits of a computer program. We can understand the problem of collective action and use this understanding to check our growth. We can also use it to restrain, reform and educate those who defect and to enlighten the naive optimists who do not understand the possibility of defection. We can try to persuade more people and more governments to become thoughtful, discriminating cooperators. To the degree that this strategy succeeds, social capital will flourish and more of us can become realistic optimists.

TSC

NOTES

[1] R. Dawkins, *The Selfish Gene,* Oxford University Press, Oxford, 1976 and 1989.

[2] See G. Hardin, *Living Within Limits: Ecology, Economics and Population Taboos,* Oxford University Press, New York, 1993, p.228.

[3] See M. Ridley, *The Origins of Virtue,* Viking, London, 1996, pp.56, 175.

[4] For the distinction between the motives inspiring altruistic acts and the consequences of these acts see Hardin, 1993, op. cit. p.225. Hardin restricts his discussion to consequences and this is my intention as well. However I have dodged the word *altruism* and replaced it with *cooperation.*

[5] Genuine altruism, where neither the protagonist nor his or her genes gain any advantage, is always possible. It is just not an evolutionarily stable strategy.

[6] The term "casino capitalism" has been coined by Susan Strange. See H.-P. Martin and H. Schuman, *The Global Trap,* Zed Books, London, 1997, p.194.

[7] For more on social capital see R. Putnam, *Making Democracy Work: Civic Traditions in Modern Italy,* Princeton University Press, Princeton, New Jersey, 1993, especially pp.167-169, 176; and F. Fukuyama, *Trust: The Social Virtues and the Creation of Prosperity,* Hamish Hamilton, London, 1995, especially pp.10, 99-104.

[8] See the discussion of Robert Frank's analysis, Ridley, 1996, op. cit., pp.132-147.

[9] See ibid., pp.51-66.

[10] See for example, ibid., pp.61-66, 79-84; Dawkins, 1976, op. cit., pp.75-90 (or chapter 12 of the 1989 edition); and D. C. Dennett, *Darwin's Dangerous Idea: Evolution and the Meanings of Life,* Allen Lane The Penguin Press, London, 1995, pp.252-261.

[11] Ridley, op. cit., pp.62-63.

[12] The theme of Hardin's famous essay "The Tragedy of the Commons' is summarized in Hardin, 1993, op. cit., pp.217-218.

[13] Free-rider situations are described and labeled *chicken games* in I. McLean, *Public Choice: An Introduction,* Basil Blackwell, Oxford, 1987, p.48.

[14] Ridley provides a history of our understanding of the prisoner's dilemma. See Ridley, 1996, op. cit., pp.54-62.

[15] Fukuyama discusses this problem under the heading of "transaction costs"; if you are dealing with strangers whom you do not know and cannot trust, the amount of effort you have to put into striking a secure bargain rises. See Fukuyama, 1995, op. cit., pp.27-28, 151, 200-202, 352.

[16] See Ridley, 1996, op. cit., especially pp.67-84.

[17] See Dawkins, 1976 (1989), op. cit.; and Dennett, 1995, op. cit., pp.253-257, 479-480.

[18] Ridley, following his sources, calls this program Discriminating Altruist. The term *discriminating altruism* has been given specific meaning in Hardin's work. See Hardin, 1993, op. cit., pp.225-236. (Ridley's *Origins of Virtue* is useful and insightful, but he is ungenerous to Hardin. He treats Hardin's work superficially and does not refer to his ground-breaking theory of discriminating versus promiscuous altruism.) For more on discriminating altruism (cooperation) and prisoner's dilemma, see Hardin, 1993, op. cit., and Dennett, 1995, op. cit., pp.479-481.

[19] See Ridley, op. cit., pp.43, 69, 180-183.

[20] Hardin, 1993, op. cit., pp.266-267.

[21] Aristotle, *The Politics* (translated by H. Rackham), William Heinemann: The Loeb Classical Library, London, 1932, Book VII, Chapter IV, pp.557,559.

[22] R. Dunbar, *Grooming, Gossip and the Evolution of Language,* Faber and Faber, London, 1996, pp.69-79.

[23] J. Diamond, *Guns, Germs and Steel: The Fates of Human Societies,* W. W. Norton and Company, New York, 1997, pp.267-281. See also F. Fukuyama, *The End of History and the Last Man,* Avon Books, New York, 1992, pp.73-74.

[24] Ibid., pp.271-281. Diamond's case that large groups cannot rely on informal organization is strong. In contrast, Ridley argues that states themselves are the cause of wars and we should reduce their authority, relying more on the informal world of local, face to face groups. For all his sophistication he implies that these groups should be borderless and that he aspires to a human world arranged "like a water-color painting, not a mosaic of human populations." See 1996, op. cit., pp.168-169, 264.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Malthus and the Twenty-first Century

Rightly understood, he was right after all

by Virginia Deane Abernethy

Malthus knew that no population explosion would last. And he knew why. Checks, both positive and preventive (to use Malthus' terms), assure that population size and growth rates do not long exceed the carrying capacity of the environment.

Human ingenuity and social arrangements may expand the carrying capacity, but limits to expansion are bound to exist on a finite planet in a finite solar system and universe. More than that, population size sometimes outruns the inventiveness of humans; therefore, pockets of humans find themselves living under conditions which even the crassest cornucopian would likely describe as "over-populated." A threat that many populations, globally, could find themselves in this state simultaneously cannot be ruled out. Can one take comfort in knowing that the condition would be "temporary," on the scale, say, of 40 or 50 years?

The adjustments might include rising mortality from the rebound of infectious diseases, new diseases emerging as organisms jump the species barrier where large human populations live in close proximity to other species, limited clean water in some densely populated areas, worsening malnutrition, and political upheavals. In parts of Africa and other countries severely afflicted with the HIV/AIDS epidemic, AIDS is expected to slow growth enough to stabilize the population by about 2020. In Southeast Asia, especially Thailand, the growth rate may turn rapidly into negative territory.

A difference between the two regions is the *fertility rate,* the number of children that the average woman is expected to have over her lifetime. In parts of Africa this rate is still very high (over four children per woman) whereas in Thailand the fertility rate is under two, that is, less than the replacement rate even if mortality were not rising. A fertility rate in the neighborhood of 2.1 is commonly referred to as *replacement level fertility.* The population stabilizes after about 70 years of replacement level fertility, assuming no confounding influences such as emigration or immigration, or change in mortality rates.

The difference in regional fertility rates suggests a stronger operation of *preventive checks* in Thailand. Whereas rising mortality rates are *positive checks,* Malthus attributed a decline in the fertility rate to *preventive checks.* These operate when people fear a decline in their standard of living and therefore exercise reproductive caution.

Malthus also realized that the fertility rate could rise if people believed that their means of subsistence was increasing. The optimism caused by food and housing subsidies, the redistribution of wealth, decades of international assistance with development, and other interventions are likely causes of the world population explosion, amplifying the effects of better medicine and public health.

For decades, not only the numbers added each year but also the world population's *rate of increase* was rising rapidly. That much can be inferred from the compression of doubling time: 100 years to go from 1 to 2 billion; and about 45 years to go from 2 to 4 billion. *Doubling* times are going to lengthen because the *growth rate* began to decline in the late 1970s.

Nevertheless, the fifth billion was reached in 1987, in 13 years; and the sixth probably in 1998, after just 11 – this is the effect of population momentum caused by the large number of women

Virginia Deane Abernethy, Ph.D., *an anthropologist, teaches in the Department of Psychiatry at the Vanderbilt University Medical School and edits the journal* Population and Environment.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

just entering their reproductive period. But the next billion should take longer because the fertility rate is declining and the mortality rate may be rising, despite the very young average age of the world's population.

Decline in a rate does not necessarily mean decline in the absolute numbers. In the case of world population, 80 to 90 million more people are born than die each year, an increment that has been about constant for nearly a decade. The population will not stabilize until the *number* added each year — births minus deaths — is *zero*.

In fact, the population will not decline until fewer are born than die each year; this is a *negative* annual growth rate. Russia may have had a few years of negative growth in the mid-nineteen nineties. So far, no other region of the world exhibits "negative" growth. Nor should one wish on anyone a rapid shift into this negative territory, because it indicates that profoundly Malthusian processes, positive checks, are at work. Discouragement which promotes suicide, alcoholism, disease, political upheaval, and virtual refusal to carry a child to term is not particularly good news, however much one thinks that population must decline in the long run if human society is to be sustained.

Population Effects in America

Trumpeting a benign world "population implosion" as Nicholas Eberstadt (1997) and Ben Wattenberg (1997) now are doing is a farce. One suspects a motive for such distorted interpretations of fact. Wattenberg, one knows, is an advocate for high levels of immigration. Is the intended lesson from the population implosion pronouncement that, 60 years from now, a good immigrant may be hard to find?

Immigration advocates appear to assume that the United States is not and never could be overpopulated. Many environmentalists maintain, on the contrary, that the United States is the most overpopulated nation on the planet.

The fact is that the United States produces more pollution, including emissions of carbon dioxide said to cause a "greenhouse effect," than any other nation. Moreover, the per capita production of pollutants is greater than elsewhere, so each American added is a disproportionate burden on the Earth. U.S. population growth, whatever its source, is the root cause of rising energy use, this country's draw-downs on underground aquifers which exceed the replenishment rate by 25%, loss of topsoil at a rate 18 higher than replacement under agricultural conditions, urban and highway congestion, and rapid loss of species diversity. Indeed, one acre of agricultural or open land (habitat for countless species) is lost for every person added to the U.S. population.

Population growth has economic and fiscal, as well as environmental costs. For example, each new residence in Oregon adds approximately $25,000 to public expenditures for the construction of facilities for schools, roads, sewers, storm drainage, roads, water service, parks and recreation and fire protection. These are capital costs of growth which must be paid for by the community (Fodor, 1997). This 1997 study by Eben Fodor assumes that each residence accommodates three people for a cost of $8,300 per added person. If the Oregon cost-per-person is applied nationally, every one million increase of the population adds $8 billion to the tax burden born by the public.

"...few [Americans] articulate their difficulties in terms of population growth."

Oregon's building costs are neither the highest nor the lowest in the nation. A study by Carrying Capacity Network (April 1997) suggests that each added person leads to an additional public cost ranging from $4,400 in Ocala, Florida, to $18,700 in a San Francisco.

Although many Americans feel uneasy — "the country is on the wrong track" — and appear to sense that former prosperity, security, and pride in country is fading, few articulate their difficulties in terms of population growth. The tendency is to blame known villains rather than question whether population has outrun the capacity of the economy to fulfill the expectations that most held - the American dream. Malthus would have seen in the new national cynicism the conditions fostering preventive checks on further population growth.

The 1973-74 OPEC oil embargo, rising levels of

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

immigration, globalism, and decades of stagnant real, personal disposable income affecting approximately 80% of the working age population cannot fail to have been among the factors that encouraged extreme caution in undertaking marriage and the responsibilities of parenthood (Abernethy 1993). In fact, the U.S. fertility rate fell below replacement level in the 1970s and there it remains. Today, the fertility rate for whites is about 1.8 children per woman; for blacks, approximately replacement level; and for the immigrant sector, significantly higher than replacement.

What Drives U.S. Population Growth?

In a nutshell, population growth is the result of more births than deaths, and more immigrants than emigrants. The immigration impact is annual immigration, plus births to the foreign-born, minus deaths and emigration of immigrants. The native born account is births minus deaths, and emigration of this sector.

The annual immigration share of U.S. population growth rises continuously as births to recent (post-1969) immigrants are added to the flow of new arrivals. In 1994 immigration and the children of recent immigrants accounted for over 60 percent of U.S. population growth. Mexico and the combined flow from the republics of the former Soviet Union (coming mostly as "refugees") are the two largest sources of legal immigrants.

"About three-quarters of immigrants enter the labor force."

The annual flow and first generation births do not fully represent immigration's long run impact on national population size. The difference with and without immigration can be apprehended, nonetheless, from a National Academy of Sciences (NAS) projection for the year 2050. Zero immigration beginning in 1995 would have let the population peak a few years before mid-century and thereafter decline to 307 million (which is about 37 million more than today); "very high" immigration projects a 2050 population of 463 million with no end to growth in sight.

Note that these are only projections, not predictions. Other demographers (eg. Alburgh and Vaupel 1991) estimate that if current trends continue, the most likely number in 2050 AD is well in excess of one-half billion. Agreement that population growth in the twenty-first century would be almost entirely due to immigration, if present trends continue, is widespread. By the year 2050, post-1970 immigrants and their descendants will account for about 90% of U.S. population growth, if present trends continue.

The likely effect of immigration on the fertility rate of native-born Americans is another issue. If immigration is a burden, on balance, then Malthusian preventive checks should further depress fertility. Therefore, one turns to studies that break out the immigration component of the fiscal and economic costs associated with population growth.

In 1997, both the National Academy of Sciences and the Rand Corporation released estimates of certain effects of current immigration. Rand addresses fiscal costs in local communities in California. The NAS study emphasizes national trends, both fiscal and economic, and also examines fiscal effects at the state level. In California, after subtracting state and local taxes which immigrants pay, each immigrant-headed household imposes a net annual tax burden of $3,463, a deficit that is made up by all other taxpayers in the state (NAS 1997).

About three quarters of immigrants enter the labor force. Economists George Borjas, Donald Huddle, Vernon Briggs, and others using separate study populations and methodologies, find that immigration is one of the primary causes of depressed wages and displacement of American workers. Borjas concludes that the losses to native-born workers amount to $133 billion annually. Labor is cheapened by competition from the large immigrant pool, so employers benefit in the amount of approximately $140 billion for a net economic benefit of $7 billion annually.

A comparable, net $1 to 10 billion annual economic benefit is reported in the 1997 study of the National Academy of Sciences. In the days following release of the NAS report, some in the news media including the *New York Times* suggested that the annual net gain to the economy

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

overwhelmingly supported the value of immigration to the United States. The finding has since been put into perspective: $10 billion is a trivial amount in a $8 *trillion* economy and hardly worth its assorted detrimental effects. These include squeezing middle class Americans, the polarization of society into rich and poor, the fiscal costs of population growth (and, specifically, immigration) born by state and local taxpayers, and the environmental consequences of population growth.

George Borjas, one of the authors of the NAS study, compares free trade (often blamed for wreaking havoc on the labor market) with immigration, and concludes that immigration has by far the greater impact (Borjas, George, "How Not to Save American Jobs," *National Review*, Dec.22, 1997, p.20; Borjas, G. and Freeman R., Findings We Never Found. *New York Times*, Op-ed. December, 1997). Moreover, although the labor market is generally held to be national because both labor and capital move, Ed Rubenstein (*National Review*, Dec. 22, 1997, p. 12) observes that the "states with the greatest influx of immigrants generally experience the largest growth in the income gap."

"...44% of the decline in relative wage of high school dropouts between 1980 and 1994 can be attributed to the large influx of less-skilled immigrants."

Immigrants are represented at both extremes of the educational scale, although the preponderance of post-1970 immigrants (over 70 percent) have less education than the average American. Immigrants who are more skilled are concentrated in professional specialties that do not require a command of English (computer programming, mathematics, and engineering, for example). Some Americans avoid training in specialties which attract immigrants, as is perennially lamented by employers seeking computer programmers. However, the perception of being squeezed frustrates native-born job seekers who lose out to lower paid immigrants or find their options narrowing. These affected Americans are precisely the upwardly mobile young who have traditionally used technical training to get ahead but now avoid these specialties. Thus, yesterday's response to perceived labor shortage – bring more immigrants – is part of the cause of today's dearth of skilled labor.

The brunt of immigration's negative economic effects is born, nevertheless, by those who are the least skilled and already least advantaged in American society. Immigration pits them against Mexicans and Central Americans who average less than an eighth grade education. The NAS reports that "...44% of the decline in the relative wage of high school dropouts between 1980 and 1994 can be attributed to the large influx of less-skilled immigrants" (p.228). This translates into a 5 percent loss in real wages among high school dropouts, about 13 million people.

Poor people who lose marginal income are likely to become public burdens. Donald Huddle counts this effect in estimating that the public cost of immigration is $68 billion annually, after subtracting taxes which immigrants pay (Carrying Capacity Network 1997). Moreover, very low earned income erodes the incentive to work and increases the relative attractiveness of welfare and crime. Unfortunately for the future of self-government, democracy is unlikely to survive long in a country lacking the stake that a strong middle class has in its continuance.

The solution is to reduce immigration so that it does not exceed the number of young immigrants who voluntarily leave each year. The results will be many and positive. The labor market will begin to reward work with a living wage, even at its lower levels; efforts to improve the environment and infrastructure will not be overwhelmed by rapid growth in the number of users. In a renewed mood of optimism and hope, Americans may return to the habits of marriage and reproduction.

Immigration As An International Escape

Almost worldwide, the exuberant optimism which characterized post-World War II economic assistance for "development" in the third world is ending. Some recipient countries are experiencing real privation in addition to disappointment relative

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

to the high expectations that had been encouraged by aid and the rhetoric of development. Other countries are rapidly industrializing, but wealth is very unevenly distributed; a small middle class lives with insecurity. The sense of insecurity and struggle in highly competitive environments exerts downward pressure on fertility rates — one of Malthus's preventive checks.

Whereas promises that wealth would be redistributed, along with successful independence movements combined with significant subsidies for education, healthcare, food and housing, allowed fertility rates to rise after World War II in a number of countries, present conditions promote a decline in family size targets (Abernethy 1993). Malthus could have foreseen these developments. The worm has turned, however. Today, preventive checks in response to perceived scarcity account for declines in both fertility and population growth rates.

The possibility of immigrating is counter-productive in terms of supporting the rapid decline of fertility rates. Counterproductively, it encourages many people to discount the limits of their own environment, neutralizing the incentive to avoid family responsibilities that they know cannot be adequately discharged. Fertility rates would be falling faster without the safety valve which immigration offers (Abernethy 1994).

Conclusion

Had the preceding centuries seen no famine, no genocide, no class warfare, then Malthus might be doubted — the capacity of population growth to outrun growth in resources would be justly questioned. Had the centuries seen no voluntary restraint in reproduction in populations that sensed diminishment of opportunity and prosperity, then Malthus might still be doubted. Had time recorded no great flowering of fertility in precisely those populations that enjoyed new and unfamiliar wealth, one might again discount the sage. But each of these phenomena predicted by Malthus has occurred.

Critics will say there were local perturbations; political aberrations fueled by rank ambition; a new consciousness; modernity. But what caused these developments?

Is the balance between *wants* and *resources* not involved, always, in shaping how one thinks and acts? The difference in perspective is analogous to the cultural and functional schools of anthropology. The former assert that cultures are historical accidents, to be studied either *sui generis* or as a chain of borrowings. Functionalists assert that mental and behavioral phenomena are *caused;* the first cause is ecological: for example, the balance between population size and carrying capacity.

Accumulating data will judge Malthus in time. The train of events will bring round many who still are unconvinced. But as Malthus was a philosopher, let us be so, too:

A man persuaded against his will
Is of the same opinion, still.
(Women, too).

TSC

REFERENCES

Abernethy, V. *Population Politics: The Choices that Shape Our Future,* Plenum Press, NY, 1993.

Abernethy V., (1993). The demographic transition revisited: Lessons for foreign aid and U.S. immigration policy. *Ecological Economics* 8: 235-252.

Ahlburg, D.A. and J.W. Vaupel, 1990. "Alternative Projections of the U.S. Population," *Demography* 27 (4): 639-647.

Borjas, G., Freeman, R., and Katz, L., May 1996. "Searching for the labor market effects of immigration," *American Economic Review,* 246-251.

Borjas, George (1996). "The price of immigration: The new economics, *The Atlantic Monthly* (November) pp. 72-80.

Borjas, G and Freeman R., "Findings We Never Found," *New York Times,* Op-ed, December, 1997.

Carrying Capacity Network (April 1997). "Per capita costs of population growth to local communities," Washington, D.C: Author.

Carrying Capacity Network (October 1997). "Despite Welfare Cuts, Immigration's Costs Keep on Rising, New Study Reports," Washington, D.C: Author.

Eberstadt, Nicholas. "The population implosion," *Wall Street Journal,* October 16, 1997. Editorial page.

Fodor, Eben V. (1997). "The real cost of growth in Oregon," *Population and Environment* 18 (4), 373-389.

McCarthy, Kevin F. & Vernez, George. *Immigration in a Changing Economy.* Santa Monica, CA: Rand Corporation, 1997.

National Research Council (1997). *The New Americans: Economic, Demographic, and Fiscal Effects of Immigra-tion.* Washington, D.C: National Academy Press.

Rubenstein, Ed. "Right Data: Wealth Disparity Larger in High Immigration Impact Cities," *National Review,* December 22, 1997, p. 12.

Wattenberg, Ben J. "The Population Explosion Is Over," *New York Times Magazine,* Nov. 23, 1997, pp.60-64.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Malthus As Anti-Utopian

by Paul Gottfried

The two-hundredth anniversary of the publication of *An Essay on the Principle of Population* has brought forth reactions to Thomas Robert Malthus quite different from those of his own day. For someone long remembered as the somber parson who crossed swords with Enlightenment optimists, William Godwin and Marie-Jean Condorcet, Malthus in recent decades has been turned surprisingly into a voice for social planning. His admonitions about population exceeding natural resources have been recycled by zero-population-growth advocates and by those who wish to control human reproduction and ecological waste.

Malthus, meanwhile, has encountered the sneering hostility of those now described as conservatives. Today it is indicative of being against the Left, as witnessed by editorials in the *Wall Street Journal* and *Weekly Standard,* that one should downplay environmental contamination, favor open borders for the U.S. and Europe, and insist that world population will taper off between now and the middle of the next century. While there is nothing intrinsically conservative about any of these positions, they do serve as litmus tests when being "for large corporations" is one of the few allowable positions by which those on the Right can differentiate themselves. And though Malthus himself favored a free market economy and international free trade, neo-Malthusians typically do not. To whatever extent these are imagined to represent Malthus' views, their supposed inspiration has not fared well among the proponents of expanding markets and limitless technological growth.

In a deeper sense, however, it was Malthus who expressed "conservative" views based on his notion of an unchanging human nature. Note that Malthus' *Essay,* as indicated by its subtitle, was intended to refute the predictions offered in the 1790s by Condorcet and Godwin about the "future improvement of society." Unlike Godwin, who believed that the advance of mass education would diminish human sexual appetites, Malthus saw no reason to believe that the "vices and moral weakness of man could be eradicated." Humans would continue to multiply on the basis of impulse and temporary material advantage, and the principle of population would remain subject to natural forces more than to human reasoning.

Malthus challenges Godwin's opinion that "the greater part of vices and weaknesses proceed from the injustice of their political and social institutions and that if these were removed and the understandings of men were more enlightened, there would be little or no temptation in the world to evil." While Malthus plainly does not deny that some can be taught, however laboriously, to show constraint and benevolence, he nonetheless accepts as a working generality his own restatement of the doctrine of Original Sin: that "the greater part of mankind, from the fixed and unalterable laws of nature," must ever be subject to the evil temptations arising from want, besides other passions."

"Want," as used here, is not the result of absolute material privation. Otherwise Malthus would have to accept the happy future evoked by the Marquis de Condorcet, as that historical optimist awaited execution in prison under the revolution in France that he himself had encouraged. Condorcet imagined that the science of society combined with technological development would end human evil as well as material want. For Malthus, such an outcome was highly doubtful, inasmuch as "want" was related to a basic human condition. No matter how riches increased, humans would perceive themselves in relative want but, given the opportunity, would also continue to illustrate "the perpetual tendency in the race of man to increase beyond the means of subsistence." In what seems a prediction of modern underclass behavior, though one extended to the"greater part of mankind," Malthus assumes that

Paul Gottfried, Ph.D., *is Professor of Politics at Elizabethtown College. His latest book is* After Liberalism: Mass Democracy and the Administrative State *(Princeton University Press, 1998). He can be contacted by e-mail: gottfrpe@acad.etown.edu.*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

humans place themselves in want while simultaneously hungering for material acquisitions. Here one is reminded of Thomas Hobbes's definition of "felicity" in *Leviathan* as the "continued progress of desire from one object to another, the attaining of the former, being still but the way to the latter."

Despite his stated pessimism about human nature, Malthus does allow for the possibility of "limited" human improvement. On the material level, Malthus hoped that by "rendering productive" uncultivated farm lands, wealth would be "employed beneficially," particularly for "the lower order." Unlike the manufactures of industries, which he thought in the 1790s had not produced "a proportional increase in the funds for the maintenance of labor," Malthus thought that the agricultural revolution of his country would provide the key to general economic growth. Though wrong about long-range trends, Malthus may have gathered what were plausible impressions about the early seamy stages of the Industrial Revolution.

"Malthus' belief in a radically imperfect human nature ... would have left him uncomfortable with his modern admirers and modern detractors alike."

More significantly, he thought that human life was a formative experience, in which even "the partial pain that is inflicted by the Supreme Creator" was "as dust in the balance in comparison of the happiness which comes from the process by which the Supreme Being forms matter into mind" and by which we exert ourselves to remove "evil," which "exists in the world not to create despair but activity." Such moralizing, which runs through the *Essay* and is featured with particular prominence in the last two paragraphs, is not, however, a hymn to collective human improvement. It is targeted at individuals and families whom Malthus hopes to reach with his ideas about the "population principle," though it is also assumed that there are at least enough people endowed with enough natural grace and reasoning power to make the homily worthwhile. Also, Malthus clearly believed that "the sorrows of life are necessary to soften and humanize the heart." Adversity, he asserts, leads to better character for those who overcome it and for those who develop "social sympathy" as a result of witnessing suffering.

Finally, as a critic of various doctrines about social and human improvement, Malthus makes a useful distinction between "unlimited improvement" and specific improvements within limits. While the "former is not applicable to man under the present laws of his nature," the latter is and is sometimes achieved. Thus it may be possible to increase foodstuff by more effective cultivation of the land or to decrease vice in some quarters by impressing upon those who are receptive higher moral practices. Malthus also scolds Godwin for seeking to inflict unnecessary suffering on the poor by denying them the market value of their labor. By positing a visionary goal of a society of self-sufficient yeomen, according to Malthus, Godwin was led to believe that one could dispense entirely with a class of laborers. But, as Malthus points out, there was no feasible way that one could achieve the Godwinian utopia by following Godwin's advice, one took away the value of "the only property of the class of laborers," their saleable labor.

But while Malthus believed that some measures could be applied to relieving the "present great inequality of property" which he found neither "necessary nor useful," he doubted that "government could with advantage to society actually interfere to repress inequality of fortunes." Almost all political measures designed for this end would abet the vices they were intended to remove; and if carried to the extreme, would result in the tyranny that some of Malthus' acquaintances had mistaken for a birth of freedom. Like others of his generation, Malthus was stunned by the terror and brutality unleashed by the French Revolution. Some of the most forceful passages in the *Essay* are directed at that experiment then unfolding across the Channel. Like a "richer mould" that someone "would employ to increase the size of his plant" but that would "burst the calyx and destroy at once its symmetry," the "forcing manure used to bring about the French Revolution" had resulted in huge destruction. It had "burst the calyx of humanity, the restraining bond of all society" and had turned the body social into a "loose, deformed, disjointed mass."

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Malthus' belief in a radically imperfect human nature and his revulsion for social experiment would have left him uncomfortable with his modern admirers and modern detractors alike. Characteristic of both groups is the hope of transforming human nature through either a techno-economic explosion accompanied by an American democratizing mission or massive political supervision aimed at controlling human reproductive activity and the use of the environment. It is doubtful that Malthus would have sympathized with either transformational enterprise, whether the world's population will rise to 7.7 or 9.4 billion fifty years hence.

In any case, the demographic-cultural problem facing Western countries at this point is not overpopulation from indigenous peoples but a form of collective suicide. Italians, Frenchmen, Germans, and most other Europeans have negative birthrates and if not for immigration, mostly from the Third World, would be losing population. Most U.S. population growth since the Immigration Act of 1965 has come from the same source, and given further immigration reform in the 1990s and the tendency among professional couples toward ever smaller families, this trend will likely continue. At the same time, the rise of multiculturalism, of a specifically non-Eurocentric and often anti-Western expansive pluralism as a public and educational ideology, has worked in most Western societies against the maintenance or restoration of a core culture. Whatever possibility may exist for absorbing non-Western immigrants into a cultural mainstream is greatly diminished when the host population rejects its own heritage.

What does remain relevant for our society about Malthus' *Essay* is his critique of hubris. In this respect those on the "Right," like anti-Malthusians Ben Wattenberg and the late Julian Simon, who blithely identify increased population with an expanded store of human intelligence and see no practical limit to environmental exploitation, are correct to dislike the Malthusian mind set. Malthus preached the need for self-imposed limits in our material lives — for moral reasons and not only because of the insufficiency of foodstuff to feed an overabundant population. But defenders of Malthus, like Robert L. Heilbroner, John Avery, and Paul Ehrlich, who invoke Malthus in support of global social planning, are questionable Malthusians. The stringent governmental controls they advocate would not have pleased Malthus, who believed neither in the usefulness nor in the morality of political actions proposed in his own time to ameliorate poverty. Given Malthus' stated opposition to strenuous governmental solutions to the pollution problem, it is erroneous to treat him as the progenitor of today's socialist planners. Nor is it likely that someone who raged against the French Revolution would now welcome a global collectivist state established to intervene in all vital human relations.

The world to which Malthus belonged and that he addressed in his writing and teaching was a middle-class society inured to Protestant morality. It was not the post-Christian, post-bourgeois world out of which social planning that calls itself neo-Malthusian has emerged. Malthus' disqualified admirers do him no service by conferring on him an identity and a worldview that belong to their culture, not his. Though he saw birth control as an alternative to the "misery" caused by overpopulation, Malthus characteristically referred to contraception as "vice." In the second edition of his work in 1803, self-restraint was brought up as further (in this case pro-Victorian) check on excessive population growth.

It has been noted that in *Principles of Political Economy* (1820) Malthus amended his warnings about political intervention in economic affairs to advocate public works and the production and consumption of luxury goods during times of acute depression. But it was clearly palliatives, as he himself explained, that he was suggesting in order to avert the dire effects of mass poverty. The attempt by John Maynard Keynes in the thirties to claim Malthus for his own pump-priming approach to government economic policy, using passages from *Principles of Political Economy*, should not be given excessive importance. Keynes, in a biographical study, presented the later Malthus as a *forerunner* of his economic theory but never tried to decontextualize his subject. Only since mid-century has the effort been made to attach to this self-conscious anti-utopian global engineering projects he never intended — and in all likelihood would never have countenanced.

TSC

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

The Ghost of Parson Malthus

Book Review by Gertrude Himmelfarb

It used to be said that "history is past politics." Today it is more often the case that history is present politics – with unfortunate consequences for both history and politics.

Progress, Poverty and Population by John Avery recounts the debate between Condorcet and Godwin on the one hand and Malthus on the other – between the glorious vision of infinite progress and perfectibility and the grim specter of overpopulation and poverty. But that is only a prelude to the epilogue, which leaps over two centuries to bring us into the current overpopulation and global-warming debate. "Who was right?" Avery asks, Malthus in predicting that population would inevitably trump progress, leaving in its wake "poverty, misery, vice, selfishness, famine, disease, and war," or Condorcet and Godwin in believing that science and education would ensure a world of peace and plenty, "where the benevolent, creative, and intellectual sides of human nature will have a chance to flourish?" Both were right, Avery suggests; Malthus in demonstrating the indubitable fact that population, if unchecked, grows "exponentially," while the produce of the earth is "finite," and Condorcet and Godwin in anticipating the vast improvement in the condition of at least most of mankind – at least until now, when overpopulation, resulting indirectly in global warming and all the other assaults on the environment, once again threatens Condorcet's noble dream of the "progress of the human spirit."

Progress, Poverty and Population: Re-reading Condorcet, Godwin and Malthus
by John Avery
London: Frank Cass
151 pages, £ 15, paperback
ISBN 0-71464750-0

The book originated, Avery tells us, in his contributions to the annual Pugwash Conferences on Science and World Affairs from 1991 to 1993. Those solemn proceedings must have been much enlivened by the accounts of the curious lives and minds (and sexual peccadilloes) of some of the characters in this story. There is, to start with, the Marquis de Condorcet, a noted mathematician, member of the French Academy, and pioneer of the discipline of social science, the science that he took to be the rationale for the idea of progress and perfectibility. Welcoming the French Revolution as the incarnation of that idea, he found himself, after criticizing the Jacobin constitution, denounced for treason and forced into hiding, where he proceeded to spend the last months of his life writing his paean to perfectibility. He eluded the guillotine only by dying in prison of starvation. His *Esquisse d'un tableau historique des progrès de l'esprit humain* (*Sketch for a Historical Picture of the Progress of the Human Mind*) was published posthumously in 1795 under the official imprimatur of the Thermidorean regime – the counter-revolution, as it was generally perceived at the time.

Avery relates this story with great sympathy but little sense of irony. It is, in fact, a classic case of cognitive dissonance – the disjunction between one's ideas and the reality of one's life. And the work itself is a classic case of utopianism – the triumph of ideas over reality. Among the other unfortunate aspects of reality, Condorcet believed, that would be overcome in the

***Gertrude Himmelfarb** is the author of several books including* On Looking Into the Abyss: Untimely Thoughts on Culture and Society. *This review is reprinted by permission from the Times (London) Literary Supplement of January 23, 1998.*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

progress towards "absolute perfection" were ignorance, error and vice, inequality, bigotry and slavery, war, famine and disease. At one point, it occurred to him that in this state of perfection, when life would be prolonged and human beings would multiply prolifically, a time might come when the population would exceed the means of subsistence. But that period, he was confident, was too distant to be of any concern. Moreover, by then mankind would have achieved so high a level of enlightenment that population would be brought under control by contraceptive measures and promiscuity. (Like his contemporaries, Condorcet thought that promiscuity was inimical to fecundity.)

"Anticipating the problem of population, Godwin went beyond birth control or promiscuity to the ultimate solution: the diminution of sexuality itself."

Godwin's great treatise, *An Enquiry Concerning Political Justice, and Its Influence on General Virtue and Happiness*, was written about the same time as Condorcet's, but appeared two years earlier. Unlike Condorcet, Godwin lived to see the publication of his work, because he did not have the privilege of experiencing the glorious revolution that inspired them both. Both works were utopian in the more radical sense of that word – not as positing an ideal intended as a critique of reality rather than a realizable end, but as an ideal that was presumed to be eminently realizable. And in both cases, that ideal was far more radical, far more utopian, than Avery suggests. Godwin proposed abolishing not only all governmental and legal institutions, but all social ones as well, including religion, property, schools, marriage and family. (Even such enterprises as clubs, concerts and plays were objectionable, because they were collective and therefore oppressive.) In that state of perfect rationality and uncoerced morality, mankind would be liberated from ignorance and vice, war and disease, poverty and oppression, and such other human infirmities as "anguish, melancholy, and resentment."

Anticipating the problem of population, Godwin went beyond birth control or promiscuity to the ultimate solution: the diminution of sexuality itself. As mind would triumph over body, so rationality would conquer all sexual passions and men would "probably cease to propagate." And as life would be infinitely prolonged, so men would achieve near-immortality, or even, "perhaps," immortality. In one of the most remarkable passages in the book (not quoted by Avery), Godwin delineated the truly perfect utopia:

> *The men therefore who exist when the earth shall refuse itself to a more extended population will cease to propagate, for they will no longer have any motive, either of error or duty, to induce them. In addition to this they will perhaps be immortal.*

After this edenic scenario, it is almost anti-climatic to be reminded that Godwin's personal life was the very antitheses of this image of "virtue and happiness." In spite of his proscription of all emotions, he managed to fall in love with the feminist and free spirit Mary Wollstonecraft. And in spite of his contempt for that "most odious of all monopolies," marriage, he married her when she became pregnant. She died soon after giving birth to their child, leaving him with the infant and with her daughter from a previous alliance, whereupon he soon remarried, acquiring two more stepchildren and a son – a quite substantial family, even by the standards of the time. The story of that circle of free spirits would be farcical if it were not so tragic: Godwin's outrage when his admirer and disciple, Shelley, a married man, ran off not only with his daughter Mary but his stepdaughter Jane (the second Mrs. Godwin's daughter) as well; the suicide of his other stepdaughter Fanny (Wollstonecraft's daughter) who was also in love with Shelley; his reconciliation with Shelley and Mary when they got married (after Shelley's wife, pregnant and abandoned by her lover, committed suicide); Jane (now calling herself Clair) having one illegitimate child with Byron and another with Shelley (after his

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

marriage to Mary); and, the final irony, his grandson and last descendant, the child of Shelley and Mary, a product of Harrow and Trinity College, Cambridge, a Member of Parliament, and a patron of letters, attaining the respectability that Godwin theoretically despised and passionately coveted.

If Godwin's personal life was an ironic commentary on his doctrine (cognitive dissonance again), the first serious public attempt at refutation came in 1798 with Malthus' *Essay on the Principle of Population*, the first edition of which bore the subtitle *As it affects the future improvement of Society, with remarks on the speculation of Mr. Godwin, Mr Condorcet and other writers.* The thesis of the book was simple enough: no theory of perfectibility, not even a theory of progress, could withstand the ineluctable "principle of population": population, when unchecked, increases in a geometrical ratio; subsistence in an arithmetical ratio. The discrepancy between those ratios was as indisputable as the tables of multiplication and addition. Thus population would increase every twenty-five years at the rate 1, 2, 4, 8, 16, 32 ... , while the food supply was increasing at the rate of 1, 2, 3, 4, 5, 6 ... , so that in two centuries the ratio would be 256 to 9, in three centuries 4,096 to 13 and so on. That is, of course, if the population were unchecked. But it is, in fact, checked, by disease and famine resulting in death and by delays in marriage or "unnatural means," of avoiding birth.

Again, Avery underestimates the radical nature of his work. He does not make much of the recurrent words of that first edition, which go to the heart of Malthus' thesis: "misery and vice." It is this formula, as much as the inexorable ratios, that dooms any theory of progress, let alone perfection. All the checks on population, Malthus insisted, result in misery and vice – death and starvation most obviously, but delay of marriage as well, for it was misery for the mature man to deprive himself of the natural need for marriage and children, and vice to indulge his sexual instincts without benefit of marriage and children. And any measures government or society attempts by way of melioration (the poor laws, most notable) only make the situation worse, for they encourage people to have more children than the food supply can sustain. (Only in the second edition of his work, in response to criticism, did Malthus admit another check that did not issue in misery or vice: "moral restraint" not followed by "irregular gratification" or "improper arts" [i.e., birth control]. But he reiterated the "principle of population," and the public continued to read the *Essay* as if that additional check did not seriously affect it.)

It is useful to be reminded of this historical debate, because the ghosts of its protagonists hover behind the present discussion of overpopulation and global warming. It is also important to recognize Avery's strategy in muting both the exuberant optimism of Condorcet and Godwin and the bleak pessimism of Malthus. For this permits him to propose a synthesis of the two. "Who was right?" he asks in the epilogue. Both were right, or would be right, if we learn the proper lessons from them. If we attend seriously to Malthus' strictures about population growth and take the proper measures to curb it, we may look forward to that happy state of peace and plenty anticipated by Condorcet and Godwin.

"It is useful to be reminded of this historical debate, because the ghosts of its protagonists hover behind the present discussion of overpopulation and global warming."

Today, Avery tells us, it is not only the insufficiency of food relative to the population that is the problem. It is the insufficiency of all natural resources. For a long time, science and technology staved off the worst consequences of Malthusianism by providing a food supply commensurate with the population, but now science and technology have turned against us, not only by reducing the death rate, prolonging life, and nourishing and thus encouraging a vastly increased

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

population, but also, in the process, depleting petroleum, mineral and other resources, degrading the environment, destroying the ozone layer, and contributing to global warming. The consequences – not in the remote future but within several decades – will be infinitely worse than the "misery and vice" contemplated by Malthus. "The resulting ecological catastrophe, possibly compounded by war and other disorders, could produce famine and death on a scale unprecedented in history – a catastrophe of unimaginable proportions, involving billions rather than millions of people."

That catastrophe (the word appears repeatedly in this account – others, like Vice-President Gore, prefer "holocaust") can be averted only if population, the source of the evil, is brought under control. And that, Avery tells us, requires the active intervention of governments all over the world in support of birth control. He takes a benign view, for example, of China's "somewhat Draconian policy" of allowing only one child per family, explaining that "Chinese leaders obtained popular support" for that policy by an educational program showing the ill-effects of uncontrolled population. And he looks forward to its prevailing in rural areas as it already has in urban ones.

As population has to be controlled by vigorous government action, so does economic growth. Adam Smith, Avery concedes, was right to see the free market as the dynamo of economic growth. But the Malthusian theory, he insists, is as much a refutation of economic growth (and thus of the free market) as it is of population growth, for both contribute to the imminent catastrophe. "Instead of burning our tropical forests, it might be wise for us to burn our books on growth-oriented economics." What we now need is not the "empty-world" economics of Smith that "gives profits to stockbrokers," but a "full-world" economics that will prevent poverty and preserve the environment. Here too a high level of "governmental responsibility" is called for: taxes, for example, to discourage the use of fossil fuels, the reduction of working hours to "ensure a fair distribution of jobs" and, once again, a program of "zero population growth." (Avery does not specify exactly how the government will promote that program.)

"Malthusian theory is as much a refutation of economic growth (and thus of the free market) as it is of population growth, for both contribute to the imminent catastrophe."

Only then, by heeding the warnings of Malthus, will we realize the dream of Condorcet, a world in which humanity lives without waste or luxury but in comfort and security, free from hunger and unemployment, war and violence, valuing "human qualities" more than material possessions. The final words of the book evoke that paradisal state in which we "live in harmony with each other and with other species, guided by reverence for the fathomless complexity and beauty of all life on Earth."

The trouble with that beatific vision is that neither Malthus nor Condorcet is a secure guide to the past, let alone to the present or future. "The logic of Malthus," Avery tells us, "is finally catching up with us," in support of which he cites United Nations figures forecasting a world population of 10 billion by the year 2050, and between 10 to 15 billion by the year 2100. That "population explosion," he predicts, will result in the collapse of the "biophysical support systems of the planet," and thus in famine, war, and all the other consequences of the global catastrophe.

Unfortunately (for Avery, but fortunately for humanity), his projections about population growth are as unrealistic as Malthus' extrapolations from the multiplication table. The latest figures published by the United Nations have a "medium variant" estimate of 9.4 billion by 2050, and a "low variant" of 7.7 billion by 2040 – the former estimate regarded by UN experts themselves as too high and the latter as "reasonable and plausible." And those figures

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

represent the peak of population growth, the point of zero growth, after which there will be negative growth. A loss of population of about 25 percent in each successive generation will produce not 10-15 billion in 2100 but perhaps less than half of that. And that decline, the UN foresees, so far from producing "catastrophes such as wars, famines or new epidemics," will occur under "conditions of orderly progress."

An incisive article by the American demographer and social analyst Nicholas Eberstadt (originally published in *The Public Interest* and reprinted in England in *Prospect*) cites the new figures, making a compelling case for a "population implosion" rather than the familiar "population explosion." The results will not be entirely happy, but they will be very different from those posited so confidently by Avery. The most obvious changes (which are already beginning to be evident throughout the world) are a falling birthrate, a rising life expectancy, and thus an aging population. In 2050, the ratio of old people to young children is likely to be 8 to 1 in the more-developed countries and 3 to 1 in the less-developed; in Italy, which is already below the replacement level, it will be a phenomenal 20 to 1.

"Family planners might turn their attention to the more urgent problem confronting the family in an era of negative population growth."

These projections require a radical rethinking of social problems and policies. Economists are worried about the economic implications of an aging population. Will any social security program be viable with so large a discrepancy between the employed and the retired? Historians are concerned about the shift of population from the more-developed to the less-developed countries (for in spite of the lower birth rates in both, the momentum is such as to create a larger disproportion between the two). What will that imbalance do to international politics and to Western culture? Environmentalists should be engaged (but unfortunately few of them are) in revising their apocalyptic predictions about global warming, which are based on a new discredited population model of 11.5 billion. And what is the task of family planners and birth-control advocates in a world anticipating a population implosion?

Indeed, family planners might turn their attention to the more urgent problem confronting the family in an era of negative population growth. The most dramatic part of Eberstadt's essay is the conclusion where he describes that unprecedented situation: "a world never before inhabited: a world in which the only biological relatives for many people – perhaps most people – will be their ancestors." Today Italy's fertility rate is 1.2. If that rate continues for two generations, "almost three-fifths of the nation's children will have no siblings, cousins, aunts, or uncles; they will have only parents, grandparents, and perhaps great-grandparents." The situation of Europe as a whole will be only slightly different; two-fifths will have no collateral relatives. The less-developed countries will take somewhat longer to reach that state, but they will in time.

The family, Eberstadt reminds us, has been the primary socializing unit, where individuals derive their first experiences of rights and obligations, where they learn to live with each other, love each other, play and fight with each other, and where, finally, they take sustenance, material and emotional from each other. How will the new nuclear family – far more "nuclear" than anything we have known – cope with these essential tasks?

We have already confronted one revolution in the family – the revolution reflected in the statistics of divorce, illegitimacy, single-parenthood and cohabitation. The demographic statistics present us with another revolution. In addition to the fatherless family, we now have to worry about a family without peers, a family so impoverished as hardly to warrant the term "family" at all. Neither Malthus nor Condorcet, neither the doomsayers nor the utopians of our own time have prepared us for this. TSC

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

What, Me Worry?

Let immigrants keep coming in whatever numbers

Book review by Edward Levy

[*Editor's note: This pro-immigration book is being touted by such open-borders advocates as the* Wall Street Journal. *We felt our readers would like to have a close look at this statement of contrary position as part of our reflections on the Malthus bicentennial. There is insufficient space to print the extensive footnotes, all of which relate to pages in the book along with further comments by the reviewer. Copies of these are readily available by contacting* The Social Contract *at 1-800-352-4843.*]

The high regard of Joel Millman for mass immigration clearly derives from the teachings of the Julian Simon/Alfred E. Newman School of Economics and Mental Health — ignore everything that might make you feel bad. For example, he immediately (p.vi) declines any discussion of the crucial issues of macroeconomics, thereby adroitly avoiding consideration of all large-scale and long-term economic effects of immigration. And a bit later (p.48) he nonchalantly dismisses the "softer, New Age view that deals in other fears: overpopulation, environmental destruction, the 'widening gap between rich and poor'" with the logic that: "Fortunately, none of these fears is even remotely justified, nor could any of them be proven conclusively." Now that is irrefutable! And so he never refers to these "fears" again.[1]

The Other Americans: How Immigrants Renew Our Country, Our Economy, and Our Values
by Joel Millman
New York: Viking, 1997
Published by Penguin Books USA
375 Hudson St., NYC, NY 10014
369 pages, $24.95

Instead he constructs an apology for immigration that omits whatever will cast any doubts on his desired conclusion. To that end, he also omits any mention of immigration's effects, not only on environmental issues, but also on questions of ethics, culture, social cohesion, political institutions, educational opportunities, welfare and other "entitlements," or the future.. And not until p.316, one page before the end of the book, does he even allow that some immigrants do fail or that a "Jamaican drug dealer can be found."

The significant reason for blaming Millman not only for what the book does but more importantly for what it does not do is that these major omissions lead to half- or sixteenth-truths that, with authority and the semblance of truth, delude and lead to grave errors.

Despite these major flaws, the book is a treasure because it is written with the openness and enthusiasm of a sophomoric cheerleader who baldly and boldly states his credo: people are commodities and the only criterion is monetary. This is stated clearly and unequivocally: "If the mother country is not a race or a tribe or a fixed territory, what is it? That's simple. America is an economy. More precisely, it is a market" (p.57). And on the next page the message is: "the newcomer [can] add value to his assets" and "immigrant labor is the world's most traded commodity after petroleum.." All other issues are therefore ignored; and openly praised are all ways, including illegal ones, to make money. Thus, authentic data is supplied that his opponents to mass immigration can now cite without fear of being severely chastised or of being accused of making things up.

For example, although it is not indicated why, it is quite clear that immigration apologists like Millman, while extolling America, have contempt for Americans, with American blacks treated with special disdain. Thus, we are offered a clear insight into the racism of immigration apologists who save their praise for only the newest immigrants while

***Edward Levy** is a professor of music at Stern College, Yeshiva University in New York City. He is a long-time activist on population matters and a member of the advisory board of FAIR (the Federation for American Immigration Reform).*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

considering those whose ancestors arrived before 1965 decadent cosmopolitans who live "smoggy, polluted lives" and, like vampires, need a never-ending supply of "fresh blood"[2] to constantly renew their vitality. Millman amply exhibits his contempt with such statements as "the City University of New York foundered because of its open admissions" but "academically gifted immigrants bolstered it"; Haitians are "good" blacks because they are "reliable, energetic and willing to work cheap," in comparison, obviously, to the "bad" American-born blacks who "seem drawn to crime and drugs instead of work."[3] Similar remarks are made explicitly throughout the book;[4] but the attitude is implicit constantly: since immigrants have succeeded and are succeeding and native Americans are not, but could if only they were as good as the immigrants. (The very arguable point that all these immigrants brought these opportunities with them will be referred to later.) And one key reason is that the immigrant family, when compared with the many divorced, dysfunctional and disintegrating families among native-born Americans, is the embodiment of an 'authentic' village culture."[5]

Thus, the ploy of ignoring most of the issues, and all of the long-term ones, by focusing only, as the popular media loves to do, on selected "human interest" "success stories" serves to clarify this contempt. But an intriguing question is raised: since all of the disintegrating families are descended from immigrants who have been exposed to America for a longer period of time, why people who care about their children would WANT to bring them here and expose THEM to America's energy-sapping and corrupting influence is a mystery. I suppose the answer is that when these children mature, they will, in their turn, similarly need an infusion of "fresh blood" from a continuing supply of still-newer immigrants. And the beat goes on.

Another opportunity for opponents of mass immigration apologists is Millman's romanticizing of crime and his encouraging people to obey only those laws they like and disdain any law that impedes their money-making.

Among the many illegal practices he applauds are:

- piracy through the sale of "sure they're bootlegs!" audio- and video-tapes; and unlicenced peddling;[6]
- cheating customers by selling stolen or counterfeit goods such as "an imitation Rolex with no working parts" for $20 when it was bought for only $7 in New York's Chinatown;[7]
- fraud, such as not being "shy about acquiring work authorization documents through fraud"[8] or selling Asian-made goods as authentic African ones;[9]
- violation of housing regulations like zoning ordinances and rental laws; and disregard of restricted land use;[10]
- violation of hiring laws like equal opportunity regulations by use of "ethnic networking," which would be called "old-boy-ism" and "racial discrimination" if practiced by long-term American citizens but is "family loyalty" when practiced by immigrants;[11]
- violation of labor laws like minimum wage laws, child labor laws (which becomes "using the family as a labor force" when done by immigrants) and work safety laws in sweatshops;[12]
- tax evasion, which was illegal for Al Capone but approved (by Millman) for today's immigrants;[13] and of course
- a total disregard for any law pertaining to immigration. For example, a new definition of "legal" is offered to defend visa overstayers ("they were here legally to begin with") and criminalizing illegal immigration is attacked, despite the fact that "illegal" means "against the law" and that is how a criminal act is defined.[14]

It is also nice to know, according to Millman, that one Mexican town's access to a criminal smuggler gave them a "strategic advantage" over their neighbors, as having a pimp or a protection racketeer would do.[15]

The author provides a list of ethnically identified criminal businesses: a defense of "organizations like La Cosa Nostra [which] also protected the interests of the immigrants, even as they preyed on the community"[16] and the admission that "immigrant enclaves harbor criminal networks — Dominican cocaine rings, Chinese smugglers, Nigerian loan-fraud artists among them."[17]

And these crimes are shrugged off. But how many crimes does one criminal commit, only one?

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

How many criminals are necessary to corrupt and control a neighborhood, to run a protection racket, to intimidate the law-abiding majority? Even this very partial list (excluding the Russian "mafia" and Colombian and Haitian drug dealers, for example) certainly indicates that criminality is common among immigrants. At what point does exploitation become cheating and cheating become stealing? At what point can the line be drawn? If protection rackets are good business then why not straight-out burglary and robbery? And if "criminal enterprises (note the business term: they are *enterprises* not rackets) have always been part of the immigrant saga,"[18] does that mean that the importing and support of these practices should continue? Or should we, finally, try to get out of this perpetual cycle of immigration, crime, cheap labor and exploitation? How much is Millman willing to apologize for?

"Perhaps [Millman] is praising these criminal practices because they renew our traditional values by further honoring the already revered methods by which many American fortunes were ... built."

But perhaps he is praising these criminal practices because they renew our traditional values by further honoring the already revered methods by which many American fortunes were, have been, and are still being built. Obeisances to more crimes are always nice. I'm sure they are much appreciated by the powers that be.

Millman also clearly demonstrates (and here a conjecture as to "why" is possible) that immigration apologists like him not only accept crime as part of the system, but enthuse over free market capitalism at its freest while at the same time disdaining democracy. Democracy in America is particularly scorned. He prefers to ignore every poll of the last two decades, all showing that the American people want immigration decreased. Just as Ben Wattenberg would like to dictate how many children each woman should bear, Millman would deny Americans the right to decide what kind of towns, cities, states and country they would like to live in, imposing his choices whether they like it or not. And he adamantly believes that only the newest immigrants have the right to maintain the culture they bring with them, while American citizens have no right to maintain theirs.

To do this, the author first claims that America has "no common culture" because its history does not stretch "back to caves or to tiny grains of prehistoric corn "[19] and because "it went to war to become Latin, absorbing half of Mexico before 1850" and also "became Asian [by] bringing Hawaii into its territory."[20] First, rare is the country that can pass the first test; second, I'm relieved to learn, at last, the *real* reason for the Mexican War; and third, I'll have to adjust my map of the Pacific Oceanand my understanding of Hawaiian history. But putting his own spin on geography, history and word definition does not change the fact that before 1700 the land now occupied by the both the U.S. and Mexico was mostly Indian. Neither country respected Indian culture enough to incorporate much of it into its own set of beliefs and behaviors — its culture. The culture of each is different, and noticeably so, and America's culture, as noted early by de Touqueville, was set in motion by people living on America's East Coast who were uninfluenced by either Mexico or Hawaii.

Millman must be aware of this for early on he boasts that "America is becoming everybody's second country ... as a symbol, an idea of the good life, of oomph and vitality and freedom and fun."[21] And he further demonstrates his keen awareness of what culture is by telling us what cultural artifacts are valued: "baseball games, porno movies, game shows" into Mexico,[22] "video games installed in Ipatinga bars" in Brazil (exactly what people in "desperate, grinding conditions" need),[23] and cockfights,[24] and "shirtless youths waving beer bottles and trailing a Brazilian flag"[25] into the United States.

He further praises: share-cropping, where a farm-owning immigrant rents to a *compadre* who takes all the risks all the time while the owner takes only profits but no losses; the battle against Cesar Chavez' attempts to improve the migrant workers' pay scales and working conditions; the refusal to help newcomers, preferring instead to "recruit directly from [one's] home village," cheating workers who,

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

because they are illegal, have no recourse despite the "truly awful abuses" that occur in the immigrant labor market."[26]

We are also welcoming people who, Millman reports,

- have "a fear and loathing of female liberation,"
- are "slaves to commerce," who regard their "blackness" as "just one more vendor's trinket"
- who are paid to vote in their home country's elections, "presumably for the ruling party"
- who are racists, particularly anti-black racists,
- whose interpretation of "welcome the stranger" is to "meet the customer once, take his money, and not have to serve him again,"
- and who agree to be exploited "within the willing context of apprenticeship," analogous, I suppose, to accepting child molestation or statutory rape as approved behavior if the youngster "agrees."[27]

These descriptions of immigrants' behaviors, different from — but in addition to — the actual crimes cited above, ought to embarrass other immigration apologists; but they certainly enhance the reformers' position. I wonder, however, about the Americans Millman knows who gave him the cynical view that people who put business first, wife second, who sacrifice everything for money or who are so willing to be exploited are the ones who are going to "renew our values."[28]

To further insure that the views and character of American citizens — who are all descendants of earlier immigrants, of course — are discredited, Millman resorts to the by-now-transparent ruse of immigration apologists: try to make the earlier arrivers look neurotic or biased. Thus, the apologists disingenuously try to deflect all discussion away from serious issues by projecting their own flagrant racism onto anyone who disputes them. He reveals his own attitude, for example, by stating that New York City replaced its "crime-prone population ... with a better class of *homo urbanus*,"[29] and by identifying all the people he writes about by their ethnicities.

But his deceptions are pathetically inept. For example, he coyly insinuates that Californians' objections to such large immigration flows are all anti-Latin and anti-Asian because seldom does the influx from elsewhere "generate controversy."[30] But he must know full well (or else he should not have written this book) that the number of Armenians, Irish, Jews and Slavs (to use his examples) who walk over the border every day to provide cheap labor, attend California's schools, have American babies or take over neighborhoods, cities and job opportunities is small compared to the numbers of Mexicans, other Latin-Americans and Asians who are entering. He might also know that some local issues are clear, like the violation of sanitation laws in Monterey Park, California or in New York City by Chinese restaurants who dump untreated waste into the streets, and some national issues, like people-smuggling and drug smuggling, are well reported, even in the biased media.[31] Such simple cuteness is attractive only to those who are glad to destroy his argument. I wonder why Millman found it so compelling.

Also, he denigrates other Americans by depicting Yankees as "uptight," Yuppies as "workaholics," people who try to protect their investments as "rednecks," and earlier immigrants ase "bleary-eyed."[32] And he does his best to discredit American-born blacks. He ignores the fact that most of the 1960s civil rights battles were fought by American-born blacks, and that their major breakthrough was to change at least some American attitudes, laws and customs, and that they could have accomplished more were it not for immigrant blacks' taking advantage of and benefitting from their struggle, so that American-born blacks were never given full opportunity to feel assured of their ethnic pride. Thus, Millman's focus on the "successes" of today's black immigrants deliberately obscures the issue of why civil rights for blacks had to be fought for and allows the continuation of "blame the victim" rhetoric.

The "successes" Millman selects as models of behavior all seem to want to get as rich as possible as quickly as possible and create monopolies.[33] One investor buys a farm, makes his profits elsewhere so that he can keep prices down, and thus drives the other farmers to bankruptcy so that they must sell their land to "developers."[34] Others are hoteliers who build monopolies so that they can either provide all their own services (of course, immigrants create business, they do not drive others out) or force the remaining providers to bow to their wishes.[35] But once they have expanded, will there be opportunities for others? Or is immigration a gigantic pyramid

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

scheme where the only loser is the future?

Millman's "bigger is better" creed brings him delight when megalopolises are created, like the one "swelling outward on a tide of Asian immigration."[36] Is that to be our model? Or is Miami, which has the highest percentage of immigrants of any large city in America[37] and which also, as Millman carefully omits, declared bankruptcy? Or perhaps Americans' demonstrated preference for smaller cities should be considered a course correction showing that the largest cities have already grown too much, that abandoned neighborhoods have outlived their usefulness and that Americans should have the right to choose to live in areas built to human size instead of monstrous size. They may not want wall-to-wall people; they may want the "open fields"[38] in old urban areas turned into parks or returned to nature; maybe they see that trees are not only timber, that animals are not only food and that land is not only money.

But Millman's only concern is money; and he does not see the connection between the economic and ecological desolation that he himself points out: that an area "seared by drought" that produced "desperate, grinding conditions"[39] in Brazil caused migration into a city there and then into the U.S.; that "farmland is disappearing so quickly in parts of Asia" that food will have to be imported (from where, if population growth continues, is not explained, since the question is not even asked);[40] that "Mexican agriculture is even less productive now than before 1910";[41] that Senegal has "creeping desertification" and pays farmers "to keep farming and stay out of bursting cities like Dakar."[42] He then admits that the U.S. has a self-perpetuating loss of farmland, since immigrant real estate operators need still more immigrants to sell the land to,[43] and that Florida has to "struggle for useable water."[44]

Southern California's need for water is, however, not mentioned. Nor is the fact that states from Texas to Idaho and even, periodically, New York and New Jersey, are finding that the supply of water is finite. Of course, none of this can be "proven conclusively" (even though it is included here), if no questions are asked. For example, do immigrants bring water with them? Has the "struggle for usable water" in Florida stopped now that more immigrants are settled there? And if the immigrant farmers are skilled enough to be successful here, why could they not farm in their home countries? Once asked, we will find that the "aboriginal"[45] Mexicans disappeared because their overuse of irrigation to feed too many people desertified their ancient land and that such ecological ruin is occurring even faster today and is causing even more distress and more immigration.

"But Millman's only concern is money; and he does not see the connection between the economic and ecological desolation that he himself points out..."

And Millman wants to quicken the pace of such devastation in the U.S. as well. His adoration of growth at any cost makes him not see that where "farmland has been bulldozed" so that housing can "blossom,"[46] nothing else can. Nevertheless, he wants megacities and strip malls and also "lush woods and meadows."[47] He exults in the growing number of family farms and also in farmers being compelled to sell "as development encroaches."[48] He never worries whether this can continue indefinitely or why we should want marginal land to turn to desert so that California will look like Mexico.[49] As long as short-term greed is satisfied, and some people are making money, he sees no conflict between farming and paving over land, as if land, like water, is also infinite.

Obviously Millman has learned nothing from the Dust Bowl of the 1930s. Instead, he glamorizes it, referring to a "scene" of "old jalopies" ... people eating twigs and "cheap chicken parts," sleeping on cardboard and 'bathing' from a trickle of fresh water from a broken drinking fountain" under a "No Camping Sign" "near a stagnant creek" as "worthy of Steinbeck." Millman tries to beatify this shameful "scene" by saying that two fishermen, "sons, perhaps, of the Okies," were disgusted by the "stench," suggesting that precedent should always prevail. And he exalts the exploitation of immigrants by boasting that "the old days Steinbeck describes ... endure."[50] Clearly, then, we must perpetuate poverty and sustain degradation because they supply subject matter for

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

books, movies and plays. Now, there's compassion for you.

And just as clearly, precedent is sufficient reason for this to continue — indefinitely. So instead of determining which precedents are still worth following today, Millman believes that because all these things have happened before, we should continue:

- to accept present immigrants if they come from the same countries as past ones;[51]
- to praise "ethnic enclaves" (read: ghettoes and slums);[52]
- to skewer others as we were once skewered;[53]
- to bring in more immigrants because Einstein was a genius;[54]
- to calculate "rate" of immigration as if all percentages are the same number regardless of the size of the base;[55]
- to do little to impede the influx;[56]
- to celebrate "New York's return to its immigrant past," ignoring the treadmill of inadequate schools, housing, transportation and health care as well as large unemployment.[57] and
- to tolerate indentured servitude for smuggled-in illegal aliens because slavery used to be a common practice.[58]

But if the exisence of a precedent excuses everything, then we should bring back the Inquisition. Clearly, precedent is not enough.

Why, then, does Millman so fawningly apologize for immigration and desire its unending continuation? His answer is : cheap labor.[59] But how to guarantee an unending supply of immigrants who will "swell our bottom ranks"[60] and are only too happy to serve and smile and work cheap"[61] (and perhaps call him "Massa")? By depending — forever — on the world's misery to supplement our own already quite adequate pool of impoverished with a steady stream of hungry immigrants who will provide us with "fresh blood" and the "sweat and muscle" that we allegedly lack.[62] For the apologists cannot allow this pool to dry up. Rather, they must seek to sustain misery both here and abroad. Thus, they find improvement here unnecessary, since American misery is still better than what most immigrants have at home. They don't even have to admit that things are bad, even for "unemployed inner-city teenagers" who have to "compete with full-grown adults who are hungrier."[63]

And whatever difficulties American-born blacks experienced could be said to be all their own fault. That is, the descent into desolation of various black neighborhoods would have no connection with the Great Depression of the 1930s, when unemployment was rampant, and the post-World War II scarcity of goods; or their persistent exclusion from the economic mainstream until after the 1960s, when immigrants, some willing to work for low pay and under poor condition while others, from the other end of the spectrum, had more business, educational and organizational skills, began to replace them in affirmative action programs, like getting "cheap minority business loans"[64] and thereby benefitting from the laws and relative openness that the civil rights battles had achieved, would have no connection with the current status of American-born blacks. And even now, blacks who want to discard the "victim" designation are given insufficient attention. Now, if we had continued from the 1960s, we might have fewer segregated "black neighborhoods" or other "ethnic enclaves" and we might have fewer "traditionally black"[65] jobs (because, after all, why should blacks clean "white houses"?[66]) and fewer hyphenated Americans. Thus, by bringing back, taking advantage of and intensifying the focus on ethnicity, immigrants have slowed social progress.

"Why does Millman ... apologize for immigration and desire its unending continuation?"

Apologists also find improvement abroad undesirable: reducing America's already disproportionate use of developing countries' resources, either by conservation or by limiting our population size and thus the number of American over-consumers, would help developing countries; but restricting their improvement would serve us better. Millman explains how this works domestically. A neighborhood is allowed to get increasingly poorer

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

until "renewing" it becomes profitable.[67] This would apply to Brownsville, Brooklyn, which despite what Millman says about it, was already a slum — albeit a Jewish rather than a black one — when I was born there, on the very same Ralph Avenue he names, in 1929. Margaret Sanger opened her clinic there to help people have no more children than they could adequately care for. The volume of trade resulted, not from well-being, as he alleges, but from many people living in crowded conditions. Its further decay produced even more misery and thereby yielded even more people willing to work cheap. Thus, its "renewal" was profitable; but it could have helped the previous residents and not the newest immigrants.[68]

For it is deceptive to suggest that immigrants either created or brought opportunities with them, since it is now known that innovation, not capital or labor, creates opportunities. America offered these opportunities (and the immigrants could have succeeded in their home countries if this were not the case) and Americans other than the newest immigrants could and should have benefitted from them., except where they could not compete with the foreign investors[69] (who were, of course, from the "huddled masses"). It is our failure, then, that immigrants are preferred: chosen first and given first choice.

Internationally it works, as Millman is pleased to admit, by having immigration function as a "safety valve'" and a "brain drain" of people whose absence reduces oppressive governments' need to reform, "lets bad rulers perpetuate bad policy," supports Asian oppression, sustains a "slave system" in Senegal and allows some Senegalese to "impoverish the state but enrich themselves," and prolonged the killing in the civil war in El Salvador that was "funded by remittances from Salvadoran refugees.[70] All this to get "cheap, loyal (read: docile) labor" that gives an unfair advantage to unscrupulous employers who define exploitation as "productivity."[71]

Thus, Millman cheerfully lets us in on what the immigration apologist's case is built on: disdain for America's character, dismissal of democracy, defense of crime, distortions of both history and geography (space limitations prevented mentioned of all there are), deification of unending growth, denial of valid concerns, and a desire that past ills go on and on. Certainly better arguments for immigration can be and have been made; but this book provides remarkable insight into how and what current apologists think. Other immigrationists may — and should — be embarrassed by it. And the disclaimer that no one book can deal with all the issues related to immigration and that this one won't even try is, first, untrue, and second, cannot begin to balance the extravagant claim made in the title.[72]

And his fatuous statements that stopping immigration is "next to impossible"[73] sound too much like the old sexist, cynical and senseless advice: "when rape is inevitable, relax and enjoy it" that was offered to women before we knew that, in our culture, rape is about violence, not sex or breeding and certainly not love. So Millman tells us, at least eight times, to enjoy being made a colony of Asia,[74] to join the Mexican who regards the reconquest of America's Southwest as a laughing matter,[75] to be as joyful as he is about Americans becoming extinct, forever replaced by new and newer immigrants and to rejoice in having the country's future made perilous because some people want short-term gains.

Well, most of us don't agree because we know that prevention has never been tried but could work: employer sanctions with fraud-resistant work authorization documents, keeping track of visa expiration dates, adequate border patrols to prevent entry and adequate funding of the INS, all the "side issues" that Millman dismisses so cavalierly, as he does with everything that offers contrary evidence.[76] In the race, then, between awareness and disaster, Millman comes out solidly in favor of disaster; and to get us to follow him there, he tries to delude us with little things such as asserting that quality of life declines as population decreases instead of the other way around,[77] or like omitting any mention of how much stress is created and how much money is lost because of work/hours spent in traffic jams, or never mentioning how many businesses, immigrant-run or not, fail (I could provide him a nice list just from the few blocks near where I live).

I am left with the strong impression that Millman celebrates what more sensible and caring people deplore. Or perhaps he is just following the advice of one of the immigrants he talks about: "You don't have to lie, you just don't tell everything."[78]

TSC

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

A Malthusian Perspective

Current population and environmental concerns viewed through Malthus' eyes

Book Review by Wayne Lutton

Thomas Robert Malthus is irrevocably linked with the great dilemma he identified in his famous *Essay on Population*, namely, that the prospects for continued improvements in the general condition of mankind was always at risk because population growth could at some future date outstrip the food supply. At the time Malthus was writing, popular philosophers promoting the Enlightenment "Idea of Progress" argued that a large and growing population was a major contributor to both economic advancement and national power. Malthus rebutted the assertion that population growth was always desirable. On the contrary, Malthus cautioned, populations cannot expand forever and a limit must be reached. He feared that populations would increase until they exceeded their food supply, thus leading to a deadly population crash. His *Essay* was intended as a fair warning. As he remarked in the first sentence of his final paragraph, "Evil exists in the world, not to create despair, but activity." He hoped to spare mankind from a miserable future by encouraging restraint.

In the years since his *Essay* was first published, "Malthusian" has become a permanent part of our vocabulary. It is today most often heard in debates over population growth and by environmentalists concerned with the balance between population and exhaustible resources.

A Bicentennial Malthusian Essay: Conservation, Population and the Indifference to Limits
By John F. Rohe
Traverse City, MI: Rhodes and Easton
191 pages, $18.95

John Rohe, a lawyer with a long interest in environmental and population issues while living in a Northern Michigan resort community, asks if Malthus's 1798 *Essay* raised questions that should concern a late twentieth century audience. As the title of his new book, *A Bicentennial Malthusian Essay*, suggests, Rohe contends that Malthus broke new ground by drawing attention to the inter-related challenges of population theory and economics, with their associated social, ethical and moral dimensions.

To Rohe, society at large seems incapable of appreciating that population and economic growth cannot go on perpetually. Perhaps because of our biological time frame, the delayed consequences of some of our actions has led to a general indifference to limits.

After first providing a brief overview of Malthus' upbringing and identifying his key concepts, Rohe then considers current controversies in the areas of population and economic growth. The author employs the effective device of introducing each chapter with a quotation from the *Essay on Population*, which serves as a further reminder to his readers that "Malthus speaks to us!" — that he has a still-current message which contradicts those who promote unlimited growth for its own sake. As the author puts it:

> *By championing the cause of economic growth, we satisfy short-term consumptive appetites, but leave a legacy of high entropy: bountiful landfills, polluted waters and toxic air. By concealing this mess from our view and by hurling it elsewhere, we suppress reality and heap dishonor upon our successors. Not all growth is necessarily harmful. Growth, however, has become a goal in itself.*

The worst of Malthus's prophecies have been

Wayne Lutton, Ph.D., *is associate editor of* The Social Contract. *His most recent publications include chapters in* Human Rights—Opposing Viewpoints *(Greenhaven Press, 1998) and in* The Real American Dilemma *(New Century Books, 1998).*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

postponed in the Western world. Rohe marshals evidence to support his contention that our high standard of living has been obtained only by squandering our resource capital, such as the 1.1 million acres of prime crop land paved over by urban sprawl every year (3,000 acres per day). Elsewhere in his book, the author does some back-of-the-envelope math dealing with population growth, doubling times, and the concept of "carrying capacity" (how many people and at what level of existence can a given environment sustain).

Like Malthus, Rohe ends his own *Essay* on a note of hope. If people are able to comprehend that there are limits to growth, and will take personal and community responsibility for ensuring that resources are not exhausted, then there is no theoretical reason why future generations will be forced to exist in a new Dark Age. TSC

Globalization versus The Common Good

Book Review by Ted Wheelwright

The authors say in their acknowledgment that their book is dedicated to "all those who care for the environment and wish to stop its current vandalization in the name of 'progress' and corporate profit." Sauer-Thompson is at Flinders University and Smith at the University of Adelaide. They also say they do not owe thanks to many people in the academy, where their project met with indifference and hostility.

Beyond Economics: Postmodernity, Globalization and National Sustainability
by Gary Sauer-Thompson and Joseph Wayne Smith
Aldershot, UK: Avery
258 pages

It is an important book which accurately focuses on the contemporary Australian mood of "insecurity, anxiety, and anger" — insecurity because of the reduced standard of living for many; anxiety because our cultural traditions do not seem to help deal with the crisis; and anger because the market is tearing our social fabric apart, and "we are losing our sense of belonging and identity."

There are six long chapters which could have been shortened and improved by good editing, but each contains crucial material and arguments. The first focuses on the failure of the opening up of Australia to the global market to bring benefits to all. It notes that the result has been the rich getting richer and the poor poorer, less control over our lives, more dependence on the market which cares nothing for our quality of life, and high unemployment, especially for the young. The opening-out to the global market over the last five years is seen as working in favor of "the financial, banking and business executives and élite in the state administrative bureaucracy" (p.5).

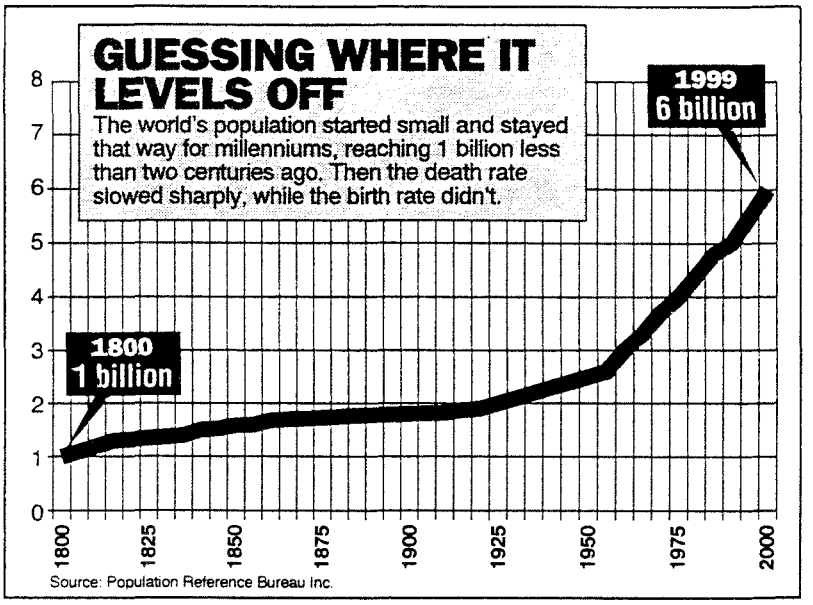
Consequently, corporate politics has perverted those forms of politics which were meant to connect citizens to government. Citizens have become disenfranchised and corporations enfranchised, as global capital seeks open borders, minimal government, and a high-tech version of 19th century working conditions" (p.8). The process of opening to the global market is being managed by a centralized state on behalf of big capital.

The authors consider that most Australian workers thought they belonged to the middle class, or aspired to join it. However, globalization, deregulation, privatization and computerization are putting an end to these aspirations, and what has resulted is the loss of sovereignly and a national way of life. This is also linked to impending ecological catastrophe; a central issue of our time is ecologically sustainable development.

This issue is pursued in the third chapter which

E. L. "Ted" Wheelwright, Ph. D., is Professor of Economics Emeritus at the University of Sydney.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED



develops Herman Daly's thesis that globalization fatally wounds the ability of a community to carry out policies for the common good, especially those relating to the environment. The market destroys community, hence the conclusion that "the market should be subordinated to the ecological good life of the citizens of the nation state ... the question is: who is to be master — citizens or business?" (p.132)

The fourth chapter argues that the power of the state is still necessary for citizens to be able to control the market to ensure national ecologically sustainable development. "It gives us a possibility to build a way of life that counteracts the traditional economic nationalist one of an industrial nation with high levels of immigration, large domestic market, domination of nature, exploitation of human beings, statism, fantasies of an inexhaustible cornucopia of technological improvements, and dependency on exports for our well-being" (p.175).

The fifth chapter engages the debate on nationalism, arguing that reason and tradition are not absolute opposites: "reason is encultured within traditions and presupposes prejudice and ideologies" (p.186). The nation state is seen as a historical tradition, Australian nationalism as an anti-colonial discourse, and national culture as an expansion of political identity, which is being destroyed by globalization, deregulation, and privatization.

The final chapter accepts the arguments of Nietzsche that the crisis of modernity is the loss of the commonly shared culture with which citizens can deal with the world created by capitalism. Liberalism has collapsed into an apology for the market which commodifies everything, including education.

> *The Enlightenment turned technological has become an ideological screen for an increasingly authoritarian business democracy in which we have basically one political party with two right wings... Economic science is being used to maintain growth and prove there is no acceptable alternative to the existing form of society beyond their reforms of structural efficiency, public sector downsizing, privatization and deregulation of the market to integrate and subordinate the state to the international economy* (p.247).

The book is a welcome contribution by Australia to the world's growing body of literature critical of globalization, but oddly makes no reference to the first such contribution: *Australia: A Client State* by myself and Greg Crough (Melbourne: Penguin, 1982), or to the Trans-national Corporations Research Project which we founded in 1975 at the University of Sydney, producing many books and articles on the subject. Nevertheless, this work is a *tour de force* and should be read by all those concerned about what is happening to Australia.

It is also of interest to readers elsewhere, especially those in countries which have received large amounts of foreign capital and experienced high levels of immigration. It shows clearly that transnational capitalism is a *cause* of many of the world's problems, not a solution to them. TSC

CHANGING YOUR ADDRESS?

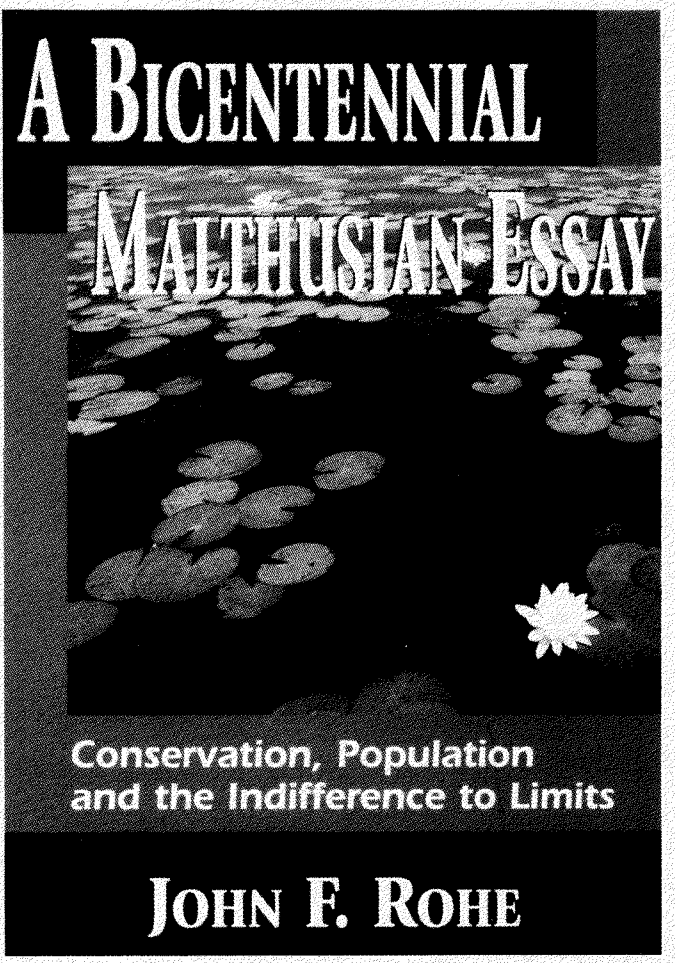
Simply write your new address along with the word "change" on one of the pull-out subscription cards in this journal and drop it in the mail. No postage necessary. It's that easy.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

A Bicentennial Malthusian Essay

Conservation and the Indifference to Limits

By John F. Rohe



In 1798, Thomas Robert Malthus wrote a controversial *Essay on the Principle of Population* in which he stated: "...the power of population is indefinitely greater than the power in the earth to produce subsistence for man." Two hundred years later, a far more congested world is caused to make room for an additional 250,000 people every day (total births minus total deaths). Malthus suggested there might be an inverse relationship between the quantity and the quality of human life. Approximately one billion people now go to bed hungry every night. Several hundred thousand die of malnutrition every year. Violence and hostility are on the rise in increasingly over-populated regions. Malthus recognized limits. Was he the "squeezing, grasping, covetous old sinner" inspiring Dicken's fictional Scrooge? Or does the Malthusian message of 1798 have relevance to the present world?

In this Bicentennial Malthusian Essay, author John Rohe revisits principles found controversial in 1798 in identifying a root cause of our unrest.

Traverse City, MI: Rhodes and Easton, 1997
192 pages, hardcover $18.95

To Order Call 1-800-352-4843

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

THE SOCIAL CONTRACT

316½ E. Mitchell Street
Petoskey, Michigan 49770

Address Correction Requested

Nonprofit Org.
U.S. Postage
PAID
Permit No.299
Petoskey, MI

Is Your Address Changing?
Please notify us in advance.
See instructions on page 284.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED